

Bay Area Air Quality Management District

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Permit Evaluation and Statement of Basis for RENEWAL of

MAJOR FACILITY REVIEW PERMIT

|
for
Anheuser-Busch, LLC
Facility #A0606

Facility Address:
3101 Busch Drive
Fairfield, CA 94534

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April 2016

Application Engineer: Dharam Singh
Site Engineer: Dharam Singh

Application Number: 25108

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Title V Statement of Basis

A. Background

This facility is subject to the Operating Permit requirements of Title V of the federal Clean Air Act, Part 70 of Title 40 of the Code of Federal Regulations (CFR), and BAAQMD Regulation 2, Rule 6, Major Facility Review because it is a major facility as defined by BAAQMD Regulation 2-6-212. It is a major facility because it has the “potential to emit” (as defined by BAAQMD Regulation 2-6-218) more than 100 tons per year of CO, and more than 100,000 tons per year of CO₂, which are regulated air pollutants.

Major Facility Operating permits (Title V permits) must meet specifications contained in 40 CFR Part 70 as contained in BAAQMD Regulation 2, Rule 6. The permits must contain all “applicable requirements” (as defined in BAAQMD Regulation 2-6-202), monitoring requirements, recordkeeping requirements, and reporting requirements. The permit holders must submit reports of all monitoring at least every six months and compliance certifications at least every year.

Pursuant to Regulation 2, Rule 6, section 416, the District has reviewed the terms and conditions of this Major Facility Review permit and determined that they are still valid and correct. This review included an analysis of applicability determinations for all sources, including those that have been modified or permitted since the issuance of the initial Major Facility Review Permit. The review also included an assessment of all monitoring in the permit for sufficiency to determine compliance.

In the Bay Area, state and District requirements are also applicable requirements and are included in the permit. These requirements can be federally enforceable or non-federally enforceable. All applicable requirements are contained in Sections I through VI of the permit.

Each facility in the Bay Area is assigned a facility identifier that consists of a letter and a 4-digit number. This identifier is also considered to be the identifier for the permit. The identifier for this facility is A0606.

This facility received its initial Title V permit on March 12, 2001 and a renewal permit on June 19, 2008. Although the current permit expired on June 19, 2013, it continues in force until the District takes final action on this permit renewal application.

The facility has submitted NSR/Minor revision applications since the last renewal permit was issued on June 19, 2008. These applications will be folded in this permit renewal application instead of processing them as minor revisions individually, and are listed as follows:

Application #	Description	Date of Receipt
14637*	Emergency Diesel Engine Gen-Set	5/16/06
15996*	Bio-Energy Recovery System	4/13/07
16014**	Minor Revision for Application # 15996	4/13/07
16809	ERC Transfer	10/9/07
17041*	Can Line Filler Replacement	11/28/07

18967	Jet Ink Coders	10/7/08
21166	Abatement Device Replacement	10/6/09
23185	Abatement Device Replacement	3/18/11
23812	Change of Permit Condition	10/6/11
26402***	Videojet Bottle Coders	06/30/14
26426***	Videojet Bottle Coders	07/03/14
27041***	Case Coder	03/20/15

**These NSR applications were omitted and not incorporated in the last permit renewal A# 13303 and have been folded in the current permit renewal.*

***This minor revision application is pending processing and has been folded in the current renewal application.*

****These NSR applications were recently processed and have been folded in the current renewal application*

The proposed permit shows all changes to the permit in strikeout/underline format.

B. Facility Description

The facility is a manufacturer of malt beverages (beer) produced from malted barley, rice, corn, water and other raw materials. Processes include grain receiving and handling, brewing, fermentation and aging, packaging and residual processes.

There has been no significant net change in emissions facility wide, as shown below, due to modifications of the existing sources, deletion of some sources, and addition of new sources since the last Title V permit renewal (Application # 13303). The increase in SO₂ potential emissions of 4.4 tpy is due to combustion of biogas (produced at S-166) in the boilers, S-1, S-2, and S-3 because H₂S content of biogas is higher than that of natural gas. The increase in CO potential emissions of 3.6 tpy is due to combustion of biogas in the flare, S-167, during startup, shutdown or malfunction of the boilers.

Application #	Permitted Emissions (tons/yr)					Permitted Emission Change (tons/yr)				
	NO _x	CO	PM ₁₀	POC	SO ₂	NO _x	CO	PM ₁₀	POC	SO ₂
14637	0.071	0.012	0.002	0.004	0.003	0.071	0.012	0.002	0.004	0.003
15996	0.6	3.6	0.3	0.7	4.4	0.6	3.6	0.3	-4.3	4.4
17041				4.728					4.728	
18967				0.304					0.304	
21166										
23185										
23812										
26402										
26426										
27041										
Total						0.671	3.612	0.302	0.736	4.403

C. Permit Content

The legal and factual basis for the permit follows. The permit sections are described in the order presented in the permit.

I. Standard Conditions

This section contains administrative requirements and conditions that apply to all facilities. If the Title IV (Acid Rain) requirements for certain fossil-fuel fired electrical generating facilities or the accidental release (40 CFR § 68) programs apply, the section will contain a standard condition pertaining to these programs. Many of these conditions derive from 40 CFR § 70.6, Permit Content, which dictates certain standard conditions that must be placed in the permit. The language that the District has developed for many of these requirements has been adopted into the BAAQMD Manual of Procedures, Volume II, Part 3, Section 4, and therefore must appear in the permit.

The standard conditions also contain references to BAAQMD Regulation 1 and Regulation 2. These are the District’s General Provisions and Permitting rules.

Changes to permit:

- The dates of adoption and approval of rules in Standard Condition 1.A has been updated.
- Regulation 2, Rule 5 – New Source Review of Toxic Air Contaminants and
- SIP Regulation 2, Rule 6 - Permits, Major Facility Review has been added to Standard Condition 1.A.
- Standard Condition I.G has been updated for better clarity.

II. Equipment

This section of the permit lists all permitted or significant sources. Each source is identified by an S and a number (e.g., S-24).

Permitted sources are those sources that require a BAAQMD operating permit pursuant to BAAQMD Rule 2-1-302.

Significant sources are those sources that have a potential to emit of more than 2 tons per year of a “regulated air pollutant” (as defined in BAAQMD Rule 2-6-222) or 400 pounds per year of a “hazardous air pollutant” (as defined in BAAQMD Rule 2-6-210).

All abatement (control) devices that control permitted or significant sources are listed. Each abatement device whose primary function is to reduce emissions is identified by an A and a number (e.g., A-24). If a source is also an abatement device, such as when an engine controls VOC emissions, it will be listed in the abatement device table but will have an “S” number. An abatement device may also be a source (such as a thermal oxidizer that burns fuel) of secondary emissions. If the primary function of a device is to control emissions, it is considered an abatement (or “A”) device. If the primary function of a device is a non-control function, the device is considered to be a source (or “S”).

The equipment section is considered to be part of the facility description. It contains information that is necessary for applicability determinations, such as fuel types, contents or sizes of tanks, etc. This information is part of the factual basis of the permit.

Each of the permitted sources has previously been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2, Permits. These permits are issued in accordance with state law and the District’s regulations. The capacities in the permitted sources table are the maximum allowable capacities for each source, pursuant to Standard Condition I.J and Regulation 2-1-403.

There are no differences between the equipment list in the permit and the equipment list in the original Title V permit application.

Changes to permit:

- Following sources and abatement devices have been deleted because they were removed from the site: S-22, S-60, S-61, S-62, S-63, S-64, S-65, S-66, S-67, S-68, S-69, S-70, S-71, S-75, S-76, S-77, S-78, S-121, S-138, S-139, S-143, S-144, S-145, S-146, S-147, S-148, S-154, A-11, and A-14.
- Following sources and abatement devices have been added: S-165, S-166, S-167, S-168, S-169, S-170, S-171, S-172, S-173, S-174, S-175, S-177, S-178, S-179, A-51, A-54, A-166, and A-167.

III. Generally Applicable Requirements

This section of the permit lists requirements that generally apply to all sources at a facility including insignificant sources and portable equipment that may not require a District permit. If a generally applicable requirement applies specifically to a source that is permitted or significant, the standard will also appear in Section IV and the monitoring for that requirement will appear in Sections IV and VII of the permit. Parts of this section apply to all facilities (e.g., particulate, architectural coating, odorous substance, and sandblasting standards). In addition, standards that apply to insignificant or unpermitted sources at a facility (e.g., refrigeration units that use more than 50 pounds of an ozone-depleting compound) are placed in this section.

Unpermitted sources are exempt from normal District permits pursuant to an exemption in BAAQMD Regulation 2, Rule 1. They may, however, be specifically described in a Title V permit if they are considered “significant sources” as defined in BAAQMD Rule 2-6-239.

Changes to permit:

Language has been added to Section III to clarify that this section contains requirements that may apply to temporary sources. This provision allows contractors that have “portable” equipment permits that require them to comply with all applicable requirements to work at the facility on a temporary basis, even if the permit does not specifically list the temporary source. Examples are temporary sand-blasting or soil-vapor extraction equipment.

Section III has been modified by adding the address of EPA website.

Table III has been updated by adding the following rules and standards to conform to current practice:

- SIP Regulation 2-1-429, Federal Emissions Statement
- BAAQMD Regulation 2, Rule 5, New Source Review of Toxic Air Contaminants
- SIP Regulation 8, Rule 3

Description of requirement of Subpart F, 40 CFR 82.156, 82.161, and 82.166 has been updated.

The dates of adoption or approval of the rules and their “federal enforceability” status in Table III has been updated.

IV. Source-Specific Applicable Requirements

This section of the permit lists the applicable requirements that apply to permitted or significant sources. These applicable requirements are contained in tables that pertain to one or more sources that have the same requirements. The order of the requirements is:

- District Rules
- SIP Rules (if any) are listed following the corresponding District rules. SIP rules are District rules that have been approved by EPA for inclusion in the California State Implementation Plan. SIP rules are “federally enforceable” and a “Y” (yes) indication will appear in the “Federally Enforceable” column. If the SIP rule is the current District rule, separate citation of the SIP rule is not necessary and the “Federally Enforceable” column will have a “Y” for “yes”. If the SIP rule is not the current District rule, the SIP rule or the necessary portion of the SIP rule is cited separately after the District rule. The SIP portion will be federally enforceable; the non-SIP version will not be federally enforceable, unless EPA has approved it through another program.
- Other District requirements, such as the Manual of Procedures, as appropriate.
- Federal requirements (other than SIP provisions)
- BAAQMD permit conditions. The text of BAAQMD permit conditions is found in Section VI of the permit.
- Federal permit conditions. The text of Federal permit conditions, if any, is found in Section VI of the permit.

Section IV of the permit contains citations to all of the applicable requirements. The text of the requirements is found in the regulations, which are readily available on the District or EPA websites, or in the permit conditions, which are found in Section VI of the permit. All monitoring requirements are cited in Section IV. Section VII is a cross-reference between the limits and monitoring requirements. A discussion of monitoring is included in Section C.VII of this permit evaluation/statement of basis.

Complex Applicability Determinations

The facility is not subject to 112(j) of the Clean Air Act because it is not a major source of hazardous air pollutants. The only source of HAP emissions at the facility is S-135 Railcar Fumigation Venting. Source, S-135 is an operation involving the ventilation of fumigant from railcars filled with grain used in the brewing process. HAP emissions from the fumigant ventilation are not significant and are limited by permit conditions to much less than 10 tons per year.

CAM

40 CFR Part 64, Compliance Assurance Monitoring, does not apply since none of the abated units at this facility have pre-abated criteria-pollutant emissions in excess of 100 tons per year.

Emission calculations based on the maximum throughput rate for the unit and unabated emission factor from the USEPA AP-42/District Data Base/Engineering estimate are as follows:

Source #	Source Description	Pollutant	Emission factor, lb/ton	Reference	Maximum Process Rate, lb/hr	Maximum Hours of Operation	Maximum Annual Throughput, TPY	Pre-abated emissions, TPY
11	Grain Unloading	PM-10	0.0947	1	80,000	8,760	350,400	16.59
13*	Grain Area Vacuum Cleaning System	PM-10	0.0947	1	80,000	8,760	350,400	16.59
14	Silo Unloading	PM-10	0.04	2	32,000	8,760	140,160	2.82
36	Grain Dust Transfer	PM-10	0.04	2	900	8,760	3,942	0.08
53*	Waste Paper Baler	PM-10	0.003	5	10	8,760	44	0.0
124	Alpha fermentation Tanks	VOC	2	6	4	8,760	19	0.02
125	Precoat Tank	PM-10	20	3	355	8,760	1,556	15.56
126	Body Feed Tank #1	PM-10	20	3	178	8,760	778	7.78
127	Body Feed Tank #2	PM-10	20	3	178	8,760	778	7.78
130	D.E./Perlite Storage Silo	PM-10	0.27	3	355	8,760	1,556	0.21
134	Air Pallet Unloader	PM-10	0.27	3	355	8,760	1,556	0.21
137	Slurry Mix Tank	PM-10	0.27	3	355	8,760	1,556	0.21
140	Grain Transfer & Storage	PM-10	0.45	1	80,000	8,760	350,400	78.84
141	Grain Milling & Weighing (malt)	PM-10	0.14	1	36,000	8,760	157,680	11.16
142	Grain Milling & Weighing (adjunct)	PM-10	0.14	1	16,500	8,760	72,270	5.12

164*	Auto Lid Feed Bag Transfer System	PM-10	2000	4	7	8,760	31	31.03
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Footnotes:

*= Exempt source with abatement device

1 = USEPA AP-42, Section 9.9.1, Grain Elevators and Processes, Table 9.9.1-1.

2 = USEPA AP-42, Section 9.9.1, Grain Elevators and Processes, Table 9.9.1-1.

3 = Engineering estimate

4 = Conservatively assumed that all paper processed will be emitted

5 = Engineering estimate

6 = USEPA AP-42, Section 9.12.1, Malt Beverages, Table 9.12.1-2

Federal Regulations 40 CFR Part 63, Subpart ZZZZ, NESHAPs for Stationary Reciprocating Internal Combustions Engines (RICE) requirements.

Emergency standby engine-generator sets, S-143, S-144, S-145, S-165, and fire pump, S-156 are powered by compression ignition (ci), diesel fired engines. They are not subject to emission and operating limitations, fuel requirements, performance testing, initial compliance, and notification requirements of this subpart. The engines are subject to the following requirements: (1) maintenance procedures of Table 2d, Part 4; (2) general maintenance for safety and to minimize emissions; (3) limited operation for non-emergency maintenance checks and testing; and (4) continuous compliance and recordkeeping.

CCR, Title 17, Section 93115 ATCM for Stationary Compression Ignition Engines

The District has reviewed all reporting requirement according to Airborne Toxic Control Measure (ATCM) section 93115.10 (a)(3) and (5) for the stationary emergency standby CI engine-generator sets, S-143, S-144, S-145, S-165, and CI fire pump, S-156. The engines meet all the requirements for reporting.

Changes to permit:

- Section IV has been updated by adding the address of EPA's website.
- The dates of adoption or approval of the rules and their “federal enforceability” status in Tables of Section IV has been be updated.
- Sequencing of the tables has been updated in the ascending source number.
- Requirements of SIP Regulation 9, Rule 1 has been added to Table IV-A.
- Requirements of SIP Regulation 9, Rule 7 has been added to Table IV-A.
- Requirements of Regulation 9, Rule 7 has been be updated in Table IV-A.
- BAAQMD Condition #17176 has been updated in Table IV-B.
- Table IV-C has been updated by deleting some sources and adding requirements of SIP Regulation 8, Rule 2.
- Tables for archived sources have been deleted.
- BAAQMD Condition #16202 has been updated in Table IV-F.
- BAAQMD Condition #9061 has been updated in Table IV-I.
- Table IV-J has been updated by adding requirements of SIP Regulation 8, Rule 2 and updating the basis of BAAQMD Condition #8195.
- Table IV-L has been updated by updating the basis of BAAQMD Condition #17177.
- Table IV-M has been updated by adding requirements of SIP Regulation 9, Rule 1 and SIP Regulation 9, Rule 8, ZZZZ citations, ATCM citations, and replacing the permit condition by Template permit condition #22850.

- Table IV-N has been updated by adding requirements of SIP Regulation 8, Rule 2.
- Table IV-O has been updated by adding requirements of SIP Regulation 8, Rule 2.
- Table IV-P has been updated by adding requirements of SIP Regulation 9, Rule 1 and SIP Regulation 9, Rule 8, ZZZZ citations, ATCM citations, and replacing the permit condition by Template permit condition #22851.
- Table IV-Q has been updated by adding requirements of SIP Regulation 8, Rule 2 and correcting the permit condition number from 595 to 21639.
- New Tables have been added for S-165, S-166, S-167, S-168, S-169, and S-170.

V. Schedule of Compliance

A schedule of compliance is required in all Title V permits pursuant to BAAQMD Regulation 2-6-409.10 which provides that a major facility review permit shall contain the following information and provisions:

“409.10 A schedule of compliance containing the following elements:

- 10.1 A statement that the facility shall continue to comply with all applicable requirements with which it is currently in compliance;
- 10.2 A statement that the facility shall meet all applicable requirements on a timely basis as requirements become effective during the permit term; and
- 10.3 If the facility is out of compliance with an applicable requirement at the time of issuance, revision, or reopening, the schedule of compliance shall contain a plan by which the facility will achieve compliance. The plan shall contain deadlines for each item in the plan. The schedule of compliance shall also contain a requirement for submission of progress reports by the facility at least every six months. The progress reports shall contain the dates by which each item in the plan was achieved and an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.”

The responsible official for Anheuser- Busch, Inc. submitted a signed Certification Statement form dated February 9, 2015. On this form, the responsible official certified that the following statements are true:

Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form that is (are) in compliance will continue to comply with the applicable requirement(s);

Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirement(s), on a timely basis;

Based on information and belief formed after reasonable inquiry, information of application forms, all accompanying reports, and other required certifications is true, accurate, and complete;

All fees required by Regulation 3, including Schedule P have been paid.

Changes to permit:

None.

VI. Permit Conditions

During the Title V permit development, the District has reviewed the existing permit conditions, deleted the obsolete conditions, and as appropriate, revised the conditions for clarity and enforceability. Each permit condition is identified with a unique numerical identifier of up to five digits.

When necessary to meet Title V requirements, additional monitoring, recordkeeping, or reporting requirements have been added to the permit.

All changes to existing permit conditions are clearly shown in “strike-out/underline” format in the proposed permit. When the permit is issued, all “strike-out” language will be deleted and all “underline” language will be retained, subject to consideration of comments received.

The existing permit conditions are derived from previously issued District Authorities to Construct (A/C) or Permits to Operate (P/O). Permit conditions may also be imposed or revised as part of the annual review of the facility by the District pursuant to California Health and Safety Code (H&SC) § 42301(e), through a variance pursuant to H&SC § 42350 et seq., an order of abatement pursuant to H&SC § 42450 et seq., or as an administrative revision initiated by District staff. After issuance of the Title V permit, permit conditions will be revised using the procedures in Regulation 2, Rule 6, Major Facility Review.

Conditions that are obsolete or that have no regulatory basis have been deleted from the permit.

Conditions have also been deleted due to the following:

- Redundancy in recordkeeping requirements.
- Redundancy in other conditions, regulations and rules.
- The condition has been superseded by other regulations and rules.
- The equipment has been taken out of service or is exempt.
- The event has already occurred (i.e. initial or start-up source tests).

The regulatory basis is listed following each condition. The regulatory basis may be a rule or regulation. The District is also using the following terms for regulatory basis:

- BACT: This term is used for a condition imposed by the Air Pollution Control Officer (APCO) to ensure compliance with the Best Available Control Technology in Regulation 2-2-301.
- Cumulative Increase: This term is used for a condition imposed by the APCO that limits a source’s operation to the operation described in the permit application pursuant to BAAQMD Regulation 2-1-403.
- Offsets: This term is used for a condition imposed by the APCO to ensure compliance with the use of offsets for the permitting of a source or with the banking of emissions from a source pursuant to Regulation 2, Rules 2 and 4.
- PSD: This term is used for a condition imposed by the APCO to ensure compliance with a Prevention of Significant Deterioration permit issued pursuant to Regulation 2, Rule 2.

Additional monitoring has been added, where appropriate, to assure compliance with the applicable requirements.

Any changes to existing permit conditions are clearly shown in "strike-out/underline" format in the proposed permit. When the permit is issued, all "strike-out" language will be deleted and all "underline" language will be retained, subject to consideration of comments received.

Changes to permit:

Besides changes to the existing permit conditions, new permit conditions for S-165, S-166, S-167, S-168, S-169, and S-170 have been added.

VII. Applicable Limits and Compliance Monitoring Requirements

This section of the permit is a summary of numerical limits and related monitoring requirements for each source. The summary includes a citation for each monitoring requirement, frequency of monitoring, and type of monitoring. The applicable requirements for monitoring are completely contained in Sections IV, Source-Specific Applicable Requirements, and VI, Permit Conditions, of the permit.

The District has reviewed all monitoring and has determined the existing monitoring is adequate with the following exceptions.

The tables below contain only the limits for which there is no monitoring or inadequate monitoring in the applicable requirements. The District has examined the monitoring for other limits and has determined that monitoring is adequate to provide a reasonable assurance of compliance. Calculations for potential to emit will be provided in the discussion when no monitoring is proposed due to the size of a source.

Monitoring decisions are typically the result of a balancing of several factors including: 1) the likelihood of a violation given the characteristics of normal operation, 2) degree of variability in the operation and in the control device, if there is one, 3) the potential severity of impact of an undetected violation, 4) the technical feasibility and probative value of indicator monitoring, 5) the economic feasibility of indicator monitoring, and 6) whether there is some other factor, such as a different regulatory restriction applicable to the same operation that also provides some assurance of compliance with the limit in question.

These factors are the same as those historically applied by the District in developing monitoring for applicable requirements. It follows that, although Title V calls for a re-examination of all monitoring, there is a presumption that these factors have been appropriately balanced and incorporated in the District's prior rule development and/or permit issuance. It is possible that, where a rule or permit requirement has historically had no monitoring associated with it, no monitoring may still be appropriate in the Title V permit if, for instance, there is little likelihood of a violation. Compliance behavior and associated costs of compliance are determined in part by the frequency and nature of associated monitoring requirements. As a result, the District will generally revise the nature or frequency of monitoring requirements only when it can support a conclusion that existing monitoring is inadequate.

SO₂ Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1, S-2, and S-3 Boilers	BAAQMD 9-1-301	Ground level concentrations of SO ₂ shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours	None
	BAAQMD 9-1-302	300 ppm (dry)	None
S-156, and S-165 Emergency Standby Diesel Engine Generators	BAAQMD 9-1-301	Ground level concentrations of SO ₂ shall not exceed: 0.5 ppm for 3 consecutive minutes AND 0.25 ppm averaged over 60 consecutive minutes AND 0.05 ppm averaged over 24 hours	None
	BAAQMD 9-1-304	Sulfur content of fuel < 0.5% by weight	None

SO₂ Discussion:

BAAQMD Regulation 9-1-301

Area monitoring to demonstrate compliance with the ground level SO₂ concentration requirements of Regulation 9-1-301 is at the discretion of the APCO (per BAAQMD Regulation 9-1-501). This facility does not have equipment that emits large amounts of SO₂ and therefore is not required to have ground level monitoring by the APCO.

All facility combustion sources are subject to the SO₂ emission limitations in District Regulation 9, Rule 1 (ground-level concentration and emission point concentration). In EPA's June 24, 1999 agreement with CAPCOA and ARB, "Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", EPA has agreed that natural-gas-fired combustion sources do not need additional monitoring to verify compliance with Regulation 9, Rule 1, since violations of the regulation are unlikely. Therefore, no monitoring is necessary for this requirement for S-1, S-2, and S-3 Boilers when they are fired with natural gas or equivalent.

S-1, S-2, and S-3 Boilers may be fired with California diesel fuel with a maximum sulfur content of 0.0015% by wt. resulting in insignificant SO₂ emissions.

S-156 and S-165 Emergency standby diesel engine generators will be fired with California diesel fuel with a maximum sulfur content of 0.0015% by wt. resulting in insignificant SO₂ emissions. Moreover, the generators operate infrequently, therefore additional monitoring is not warranted.

PM Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-1, S-2, and S-3 Boilers	BAAQMD Regulation 6-1-301	Ringelmann 1.0	None (when firing natural gas)
	BAAQMD Regulation 6-310.3	0.15 gr/dscf at 6% O ₂	None
S-136 ACP Slurry Injection Tank	BAAQMD Regulation 6-1-301	Ringelmann 1.0	None
S-52 Keg Washer, S-136 ACP Slurry Injection Tank	BAAQMD Regulation 6-1-310.3	0.15 gr/dscf at 6% O ₂	None
S-52 Keg Washer, S-136 ACP Slurry Injection Tank	BAAQMD Regulation 6-1-311	4.10P ^{0.67} lb/hr, where P is process weight, ton/hr	None
S-156, and S-165 Emergency Standby Diesel Engine/Generators	BAAQMD Regulation 6-1-303	Ringelmann 2.0	None
	BAAQMD Regulation 6-1-310.3	0.15 gr/dscf at 6% O ₂	None

PM Discussion:

BAAQMD Regulation 6 “Particulate Matter and Visible Emissions”

Visible Emissions

S-1, S-2, and S-3 Boilers:

BAAQMD Regulation 6-1-301 limits visible emissions to no darker than 1.0 on the Ringelmann Chart (except for periods or aggregate periods less than 3 minutes in any hour). Visible emissions are normally not associated with combustion of gaseous fuels, such as natural gas. Sources S-1, S-2, and S-3 burn natural gas (or equivalent) exclusively, therefore, per the EPA's June 24, 1999 agreement with CAPCOA and ARB titled “Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP”, no monitoring is required to assure compliance with this limit for these sources.

S-52 Keg Washer and S-136 ACP Slurry Tank:

The processes at these sources are wet and therefore the potential for visible emissions are insignificant and no monitoring is required to assure compliance with this limit.

S-156 and S-165:

Because S-156 and S-165, Standby Diesel Engine Generators will be fired exclusively on diesel fuel with a maximum sulfur content of 0.0015% by weight (mandated for use in California), visible emissions are not expected. Therefore, S-156 and S-165 are expected to continue to comply with Regulation 6-1-303.1.

Moreover, the emergency standby generators operate infrequently, so additional monitoring is not warranted.

Particulate Weight Limitation

BAAQMD Regulation 6-310 limits filterable particulate (FP) emissions from any source to 0.15 grains per dry standard cubic foot (gr/dscf) of exhaust volume. Section 310.3 limits filterable particulate emissions from “heat transfer operations” to 0.15 gr/dscf @ 6% O₂. These are the “grain loading” standards.

S-1, S-2, and S-3 Boilers:

Exceedances of the grain loading standards are normally not associated with combustion of gaseous fuels, such as natural gas. Sources S-1, S-2, and S-3 burn natural gas exclusively, therefore, per the EPA's July 2001 agreement with CAPCOA and ARB entitled "CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources: Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP", no monitoring is required to assure compliance with this limit for these sources.

S-52 Keg Washer and S-136 ACP Slurry Tank:

The processes at these sources are wet and therefore the potential for visible emissions are insignificant and no monitoring is required to assure compliance with this limit.

S-156 and S-165:

Because S-156 and S-165, Standby Diesel Engine Generators will be fired exclusively on diesel fuel with a maximum sulfur content of 0.0015% by weight (mandated for use in California) therefore are expected to comply with Regulation 6-1-310.

Moreover, the emergency standby generators operate infrequently, so additional monitoring is not warranted. Requiring CEM or annual source tests for these sources would be onerous.

In addition, EPA’s July 2001 agreement with CAPCOA and ARB titled, “CAPCOA/CARB/EPA Region IX Recommended Periodic Monitoring for Generally Applicable Grain Loading Standards in the SIP: Combustion Sources: Summary of Periodic Monitoring Recommendations for Generally Applicable Requirements in SIP”, proposes the following monitoring to demonstrate compliance with the grain loading standard for non-utility distillate-oil-fueled emergency piston-type IC Engines: Maintain records of all engine usage (such as time or fuel meter readings) and maintenance. These sources are subject to such a monitoring requirement.

POC Sources

S# & Description	Emission Limit Citation	Federally Enforceable Emission Limit	Monitoring
S-15 and S-16 Mash Cookers, S-23 Hot Wort Tank, S-24 and S-25 Wort Aerators, S-41 Chip Washer, S-97 and S-98 Mash Cookers, S-124 Alpha Fermentation Tanks, S135 Railcar Fumigation Venting, S-149 Lauter Tub, S-150 and S-151 Brew Kettles, S155 and S-168 Can Filling Lines, S-158 Bottle Filling Line, S-166 Bio-Energy Recovery System, S-167 Flare	BAAQMD 8-2-301	Emissions of total carbon (dry basis) shall not exceed 15 lb/day and 300 ppm	None

POC Discussion:

BAAQMD Regulation 8-2-301

Monitoring to demonstrate compliance with the emission limit of total carbon (dry basis) of 15 lb/day and 300 ppm requirement of Regulation 8-2-301 is not required since the PTE for each of the sources listed above does not approach this limit.

Changes to permit:

- The dates of adoption or approval of the rules and their “federal enforceability” status in Tables of Section VII has been updated.
- Sequencing of the tables has been updated in the ascending source number.
- Requirements of SIP Regulation 9, Rule 1 has been added to Table VII-A.
- Requirements of Regulation 9, Rule 7 has been updated in Table VII-A.
- Requirements of SIP Regulation 9, Rule 7 has been added to Table VII-A.
- BAAQMD Condition #17176 has been updated in Table VII-B.
- Table VII-C has been updated by deleting some sources and adding requirements of SIP Regulation 8, Rule 2.
- Tables for archived sources have been deleted.
- BAAQMD Condition #16202 has been updated in Table VII-F.
- Table VII-J has been updated by adding requirements of SIP Regulation 8, Rule 2.
- Table VII-M has been updated by adding requirements of SIP Regulation 9, Rule 1 and SIP Regulation 9, Rule 8.
- Table VII-N has been updated by adding requirements of SIP Regulation 8, Rule 2.
- Table VII-O has been updated by deleting S-154 and adding requirements of SIP Regulation 8, Rule 2.
- Table VII-P has been updated by adding requirements of SIP Regulation 9, Rule 1 and SIP Regulation 9, Rule 8, and updating permit condition number.
- Table VII-Q has been updated by adding requirements of SIP Regulation 8, Rule 2 and correcting the permit condition number from 595 to 21639.
- New Tables have been added for S-165, S-166, S-167, S-168, S-169, and S-170.

VIII. Test Methods

This section of the permit lists test methods that are associated with standards in District or other rules. It is included only for reference. In most cases, the test methods in the rules are source test methods that can be used to determine compliance but are not required on an ongoing basis. They are not “applicable requirements” as defined by Regulation 2-6-202.

If a rule or permit condition requires ongoing testing, the requirement will also appear in Section IV of the permit.

IX. Revision History

Changes have been documented in the Title V permit and SOB.

X. Glossary

Changes to permit:

TRMP will be deleted.

XI. Applicable State Implementation Plan

Changes to permit:

The address for EPA's website is deleted and is now found in Sections III and IV. This section is retitled as Permit Shield.

XI. Permit Shield:

The District rules allow two types of permit shields. The permit shield types are defined as follows: (1) A provision in a major facility review permit explaining that specific federally enforceable regulations and standards do not apply to a source or group of sources, or (2) A provision in a major facility review permit explaining that specific federally enforceable applicable requirements for monitoring, recordkeeping and/or reporting are subsumed because other applicable requirements for monitoring, recordkeeping, and reporting in the permit will assure compliance with all emission limits.

The second type of permit shield is allowed by EPA’s “White Paper 2 for Improved Implementation of the Part 70 Operating Permits Program.” The District uses the second type of permit shield for all streamlining of monitoring, recordkeeping, and reporting requirements in Title V permits. The District’s program does not allow other types of streamlining in Title V permits.

This facility has no permit shields.
This permit has no streamlining.

D. Alternate Operating Scenarios:

No alternate operating scenario has been requested for this facility.

E. Compliance Status:

The responsible official for Anheuser-Busch, Inc. submitted a signed Certification Statement form dated February 9, 2015. On this form, the responsible official certified that the following four statements are true:

Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form that is(are) in compliance will continue to comply with the applicable requirement(s);

Based on information and belief formed after reasonable inquiry, the source(s) identified in the Applicable Requirements and Compliance Summary form will comply with future-effective applicable requirement(s), on a timely basis;

Based on information and belief formed after reasonable inquiry, information on application forms, all accompanying reports, and other required certifications is true, accurate, and complete;

All fees required by Regulation 3, including Schedule P have been paid.

F. Differences between the Application and the Proposed Permit:

The Title V permit application was originally submitted on December 20, 2012. This version is the basis for constructing the proposed Title V permit. There is no difference between the application and the proposed permit.

APPENDIX A

Engineering Evaluation Reports

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Anheuser-Busch, Inc.

S-165 Emergency Standby Diesel Engine/Generator

Application No. 14637

August 8, 2006

INTRODUCTION

Anheuser-Busch, Inc. (AB) is requesting an Authority to Construct:

S-165 Emergency Standby Diesel Engine, John Deere, Model 6068HF475, EPA Engine Family No. 5JDXL06.8049, 314 bhp

EMISSIONS

The Emissions Summary is located in Table 1.

Toxics

The PM10 emissions from this certified engine (EPA Engine Family No. 5JDXL06.8049) for the purpose of performing a toxic risk screen are 0.097 g/hp-hr. A memo dated 7/12/06 from the Toxics Section indicates that this engine passes the risk screen; the cancer risk to the maximally exposed individual is 0.36 in a million. Since this is below 10 in a million, and the engine meets TBACT, the engine passes the risk screen.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

BACT is triggered for any single pollutant that exceeds 10 pounds per highest day per Regulation 2-2-301. For this proposed project, BACT is triggered for NOx since the highest day emissions are 68 pounds. As shown in the table below, the S-1 meets the BACT2 limit for NOx for diesel engines greater than 175 hp (Reference: BACT/TBACT Handbook, IC Engine-Compression Ignition, Document #96.1.2). BACT1 for an emergency standby diesel engine is impractical and not cost effective for short hours of operation.

	CARB Certified g/bhp-hr	BACT g/bhp-hr
POC	⁽¹⁾ 0.215	1.5
NOx	⁽²⁾ 4.09	6.9
CO	0.70	2.75
PM	0.097	0.15

(1) 5% of NMHC+NOx (2) 95% of NMHC+NOx

CARB Stationary Diesel Engine ATCM

The State Office of Administrative Law approved the Airborne Toxic Control Measure (ATCM) on November 8, 2004. State law requires the local Air Districts to implement and enforce the requirements of the ATCM. Effective January 1, 2005, there is a prohibition on the operation of new diesel emergency standby engines greater than 50 bhp unless the following operating requirements and emission standards are met:

"Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations.

Diesel PM – General Requirements

1. Meet 0.15 g/bhp-hr PM standard
2. Operate 50 hours per year, or less, for maintenance and testing (except emergency use and emissions testing)

HC, NOx, NMHC+NOx, CO

1. Meet standards for off-road engines of the same model year and horsepower rating as specified in the OFF-Road Compression Ignition Engine Standards; Or if no standards have been established
2. Meet the Tier1 standards in Title 13, CCR, Section 2423 for off-road engines of the same horsepower rating, irrespective of the new engine's model year

This emergency standby diesel engine (S-165) complies with the above ATCM requirements. The diesel engine will operate for no more than 50 hours per year for maintenance and reliability testing. This engine is subject to the EPA Tier 2 requirements for HC, NOx, NMHC+NOx and CO. As shown in the table below, the engine meets these requirements.

	CARB Certified g/bhp-hr	ATCM Tier 2 g/bhp-hr
HC (POC)	0.215	None
NOx	4.09	None
HC+NOx	4.30	4.8
CO	0.70	2.6
PM	0.097	0.15

STATEMENT OF COMPLIANCE

S-165 emergency generator meets the Emergency Standby Engines provisions of Reg 9-8-330 and 9-8-530 (Inorganic Gaseous Pollutants: Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines). The engine will operate for less than 100 hours for maintenance and reliability testing as limited by Regulation 9-8-330. Conditions have been imposed to limit those non-emergency hours of engine operation to no more than 50 hours. Records of total hours of operation, emergency hours of operation and the nature of each emergency will be kept as required by Regulation 9-8-530 and enforced by Part 3 of Condition #22850.

Since the source is an emergency standby engine, S-1 is not subject to the requirements of Regulations 9-8-301, 9-8-302, and 9-8-502 per Regulation 9, Rule 8, Section 110.4.

9-8-110 Exemptions: The requirements of Sections 9-8-301, 302, and 502 shall not apply to the following:

110.4 Emergency standby engines.

The Owner/Operator should comply with Regulation 6, "Particulate Matter and Visible Emissions". Visible emissions should be less than Ringlemann 2 (Regulation 6-303).

The Owner/Operator should comply with Regulation 9, Rule 1, "Inorganic Gaseous Pollutants: Sulfur Dioxide for Limitations on Ground Level Concentration". Low sulfur diesel fuel (≤ 0.05 wt%) will be used to meet the sulfur limitation of 0.5 wt% in Regulation 9-1-304.

This project is considered to be ministerial under the District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors and therefore is not discretionary as defined by CEQA (MOP Chapter 2.3).

This project is over 1000 feet from the nearest school and is therefore not subject to the public notification requirements of Reg 2-1-412. Since the engine is more than 500 feet from a school, the ATCM limitation on when the engine can be operated does not apply [Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)1)].

Offsets are triggered for NOx and POC emissions since facility emissions are 14.4 tpy and 30 tpy, respectively. Offsets are available from the Small Facility Bank since emissions of POC are under 35 tpy.

PSD, NSPS, and NESHAPS are not triggered or do not apply to this project.

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RECOMMENDATION

Issue An Authority to Construct:

S-165 Emergency Standby Diesel Engine, John Deere, Model 6068HF475, EPA Engine
Family No. 5JDXL06.8049, 314 bhp

CONDITIONS

Condition Number 22850

Engine Family: 5JDXL06.8049
Engine Model Number: 6068HF475
Standby Power Rating: 314 BHP
Rated Speed: 1800 RPM

Conditions for S-165 Emergency Standby Diesel Engine, at Plant #606, A#14637

1. Operating for reliability-related activities is limited to 50 hours per year per engine.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(3) or (e)(2)(B)(3)]

2. The owner or operator shall operate each emergency standby engine only for the following purposes: to mitigate emergency conditions, for emission testing to demonstrate compliance with a District, state or Federal emission limit, or for reliability-related activities (maintenance and other testing, but excluding emission testing). Operating hours while mitigating emergency conditions or while emission testing to show compliance with District, state or Federal emission limits is not limited.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(3) or (e)(2)(B)(3)]

3. The owner/operator shall operate each emergency standby engine only when a non-resettable totalizing meter (with a minimum display capability of 9,999 hours) that measures the hours of operation for the engine is installed, operated and properly maintained.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(G)(1)]

4. Records: The owner/operator shall maintain the following monthly records in a District-approved log for at least 36 months from the date of entry (60 months if the facility has been issued a Title V Major Facility Review Permit or a Synthetic Minor Operating Permit). Log entries shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request.
- Hours of operation for reliability-related activities (maintenance and testing).
 - Hours of operation for emission testing to show compliance with emission limits.
 - Hours of operation (emergency).
 - For each emergency, the nature of the emergency condition.
 - Fuel usage for each engine(s).

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(4)(I), (or Regulation 2-6-501)]

5. At School and Near-School Operation:
If the emergency standby engine is located on school grounds or within 500 feet of any school grounds, the following requirements shall apply:
The owner or operator shall not operate each stationary emergency standby diesel-fueled engine for non-emergency use, including maintenance and testing, during the following periods:
- Whenever there is a school sponsored activity (if the engine is located on school grounds).
 - Between 7:30 a.m. and 3:30 p.m. on days when school is in session "School" or "School Grounds" means any public or private school used for the purposes of the education of more than 12 children in kindergarten or any of grades 1 to 12, inclusive, but does not include any private school in which education is primarily conducted in a private home(s). "School" or "School Grounds" includes any building or structure, playground, athletic field, or other areas of school property but does not include unimproved school property.

[Basis: "Stationary Diesel Engine ATCM" section 93115, title 17, CA Code of Regulations, subsection (e)(2)(A)(1) or (e)(2)(B)(2)]

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TABLE I

The following emissions are based on a 314 hp engine
and 50 hours/year testing & maintenance

	Emissions g/hp-hr	Maximum Emissions lb/day	Emissions lb/yr for 50 hr	Tons/year: 1 Engine @ 50 hr/year
NO _x	⁽¹⁾ 4.09	67.89	141.4	0.071
CO	0.70	11.62	24.21	0.012
PM ₁₀	0.097	1.61	3.35	0.002
*SO ₂	⁽²⁾ 0.154	2.56	5.33	0.003
POC	⁽¹⁾ 0.215	3.57	7.44	0.004

(1) NMHC + NO_x = 3.95 g/bhp-hr; for the purposes of determining NO_x and POC emissions, assume 95% is NO_x and 5% is POC.

(2) SO₂ =
(0.05% fuel sulfur by weight/100)(106.3 lb/hr)(454 g/lb)(1 hr/314 hp)
(64 lb SO₂/32 lb S) = 0.154 g SO₂/hp-hr

Anheuser-Busch, Inc.

Bio-Energy Recovery System (BERS)

Application No. 15996

October 18, 2007

INTRODUCTION

Anheuser-Busch, Inc. (AB) is requesting an Authority to Construct:

S-166 Bio-Energy Recovery System (BERS), Abated by A-166 Ferrous Chloride Injection, Custom Made and A-167 Scrubber, Model U.S. Filter Lo/Pro, and

S-167 Flare, Enclosed, John Zink, Model ZTOF

at their Fairfield Brewery.

DISCUSSION

The BERS process, designated S-166, will pre-treat wastewater from the brewery using an anaerobic reactor, recovering methane-rich gas (biogas). The biogas will be blended with natural gas and used to fuel two of the three existing boilers at the facility.

Wastewater from the Fairfield Brewery is currently pre-treated (screened and pH-neutralized) by the addition of caustic or acid before discharge to the Fairfield/Suisun Publicly-Owned Treatment Works (POTW). Anheuser-Busch, Inc. proposes to construct a Bio-Energy Recovery System (BERS) at the Fairfield Brewery site. The BERS process is a biological wastewater treatment system utilizing anaerobic bacteria to reduce organic material in the brewery wastewater. "Biogas", comprised primarily of methane, will be produced and collected during the treatment process. Hydrogen sulfide (H_2S) in the biogas will be controlled using a ferrous chloride desulfurization process. The biogas will be blended with natural gas used to fuel two of the three existing brewery boilers. The boilers will not be modified in any way to accommodate the biogas blended fuel. The BERS will be designed to produce biogas at a maximum rate of 500 cubic feet per minute (cfm).

The facility operates three existing boilers used to provide steam for the brewing process. The boilers, designated in the facility's Major Facility Review (MFR) Permit as Source Nos. S-1, S-2 and S-3, each have design heat input capacities of 119 MMBtu/hr (higher heating value basis). The boilers are fired exclusively on natural gas, but are permitted to burn No. 2 distillate (diesel) fuel during periods of natural gas fuel curtailment. Each boiler is equipped with low- NO_x burners and flue gas recirculation and each unit is subject to an exhaust NO_x concentration limit of 30 parts per million, dry volume basis (ppmvd) at 3 percent oxygen. Boiler #2 (S-2) and Boiler #3 (S-3) will burn biogas generated by the BERS process. Boiler #1 (S-1) will continue to burn only natural gas. The biogas will be blended with natural gas via a tap into the existing fuel gas supply piping to each boiler. It is important to note that the boilers will not be physically modified in any way to accommodate the biogas fuel. As the H_2S content of the biogas (200 ppmv after desulfurization) exceeds that of natural gas, an increase in potential emissions of sulfur dioxide (SO_2) from Boiler #2 (S-2) and Boiler #3 (S-3) will occur as a result of burning biogas. No appreciable change in emissions of NO_x , CO, POC, NPOC or PM_{10} from Boiler #2 and Boiler #3 is expected to result from the project.

The BERS process will include an enclosed ground flare as a safety device to thermally oxidize methane and H_2S that cannot otherwise be burned in the boilers as a result of startup, shutdown or malfunction of the boilers and/or BERS. The flare will be designated source S-167. The enclosed ground flare will only

receive biogas during startup, shutdown or malfunction of the boilers and/or BERS process. The flare system will be equipped with automatic gas flow and combustion controls. Thermocouple(s) will be installed in the combustion zone to facilitate monitoring and recording combustion zone temperature during flare operation. Any biogas that is burned in the flare will already have undergone H₂S abatement. Based on Anheuser-Busch's experience with BERS in operation at other breweries in the U.S., biogas burned in the flares on an annual average basis ranges from one to four percent, volume basis. For purposes of potential to emit determinations, the facility assumes that up to ten percent by volume of the BERS biogas production may be burned in the flare on an annual or 12-month rolling basis.

EMISSIONS

The Emissions Summary is located in Attachment 1.

S-166 Bio-Energy Recovery System (BERS)

Boiler #2 and Boiler #3 will burn biogas generated by BERS. After desulfurization using FeCl₂ injection (Abatement Process A-166), the H₂S concentration of the biogas will be 200 ppmvd or less (12-month average basis). An emission factor for SO₂ was derived based on the biogas H₂S concentration using the following equation:

Equation 1

$$EF_{SO_2} \left(\frac{\text{lb}_{SO_2}}{\text{MMBtu}_{\text{Biogas}}} \right) = C_{H_2S} \left(\frac{\text{scf}_{H_2S}}{\text{MMscf}_{\text{Biogas}}} \right) \cdot \frac{\text{MMscf}_{\text{Biogas}}}{\text{HHV}_{\text{Biogas}} (\text{MMBtu})} \cdot \frac{\text{lb - mole } H_2S}{385 \text{ scf } H_2S} \cdot \frac{\text{lb - mole } SO_2}{\text{lb - mole } H_2S} \cdot \frac{64 \text{ lb } SO_2}{\text{lb - mole } SO_2}$$

Where:

EF_{SO_2} = SO₂ Emission Factor (lb/MMBtu)

C_{H_2S} = Maximum biogas H₂S concentration, ppmv (scf/MMscf) = 200 ppmv

HHV = Biogas higher (gross) heating value (Btu/scf, MMBtu/MMscf)

385 = molecular volume at 68 °F.

Appendix D of AB's April 2007 application provides sulfur speciation from a similar BERS operation in the South Coast Air District. Almost 98% (by volume) of the sulfur compounds produced are H₂S; 1.5% is methyl mercaptan. Based on the design capacity and ample data from a similar BERS operation in the South Coast Air District, maximum H₂S concentrations at, or below, 200 ppmv is achievable. Emissions of SO₂ from burning biogas in Boiler #2 and Boiler #3 are calculated based on the SO₂ emission factor derived using Equation 1, based on the maximum 12-month average biogas H₂S concentration (200 ppmv) applied to a maximum annual average biogas fuel consumption in the boilers (100% utilization). Utilization of the boilers and flare is based on annual or 12-month rolling average biogas production and the relative amount of biogas consumed by the boilers and the amount diverted to the flare during periods of startup, shutdown or malfunction.

As indicated in Attachment 1, the increase in SO_x emissions from S-2 and S-3 boiler is 4.4 tpy.

S-167 Enclosed Flare

The enclosed ground flare will emit or have the potential to emit NO_x, CO, SO₂, PM₁₀ and POCs. The flare will only be utilized during periods of startup, shutdown or malfunction of the BERS or the boilers. Worst-case flare utilization, expressed as a percentage of maximum annual average biogas production, is provided in Appendix C. BERS processes operated by Anheuser-Busch throughout the U.S. and in China typically experience flare utilization ranging from one to four percent of the biogas production on an annual, or rolling 12-month average basis. For purposes of conservatively estimating and limiting the potential to emit from the flare, an annual average flare utilization of 10% (26.28 MMscf/year) has been assumed.

Potential emissions of SO₂ are estimated using an emission factor derived from biogas H₂S content, as set out in Equation 1. The maximum annual or 12-month SO₂ emissions are based on the maximum BERS production of biogas, assuming that the gas is combusted either in the flare or the boilers. Emissions of CO, PM₁₀ and POCs from the enclosed ground flare (S-167) have been estimated using emission factors published in EPA's AP-42, Section 13.5 (Industrial Flares), Table 13.5-1 (Emission Factors for Flare Operations). The emission factors are in terms of pounds emitted per MMBtu fuel (biogas) burned (lb/MMBtu). The higher heating value (HHV) of the biogas will average approximately 750 Btu/scf on an annual basis. Emissions of NO_x from the flare are estimated based on the technologically feasible/cost effective BACT level (≤0.06 lb/MMBtu) published in the BAAQMD BACT/TBACT Workbook, Guideline Revision 1, Document No. 80.1, 12/16/1991.

A-167 Scrubber

Offgas from the headspace of tanks and vessels comprising the BERS process unit (S-166) will be captured and routed to the Chemical Scrubber (Abatement Device A-167) via a collection system and blower. The primary purpose of the scrubber is to eliminate odor. The vendor-specified H₂S control efficiency of the Chemical Scrubber is: 95 percent for offgas H₂S concentrations at or above 100 ppmv; and less than 5 ppmv outlet H₂S concentration for offgas H₂S concentrations below 100 ppmv. For purposes of estimating potential to emit from the scrubber outlet, an H₂S emission factor was calculated using Equation 2, based on the maximum H₂S concentration of the offgas and the offgas flowrate through the scrubber. Potential to emit H₂S (tons per year) is therefore based on continuous operation of the scrubber (8,760 hours per year) at the maximum offgas flowrate and a conservative estimate of the maximum H₂S concentration of the offgas.

Equation 2

$$EF_{H_2S} \left(\frac{lb_{SO_2}}{hr} \right) = C_{H_2S} \left(\frac{scf_{H_2S}}{MMscf_{offgas}} \right) \cdot \frac{lb - mole H_2S}{385 scf H_2S} \cdot \frac{34 lb H_2S}{lb - mole H_2S} \cdot \frac{MMscf_{offgas}}{1E6 scf_{offgas}} \cdot \frac{Q_{offgas} (scf)}{min.} \cdot \frac{60 min.}{hr.}$$

Where:

EF_{H2S} = H₂S Emission Factor (lb/hr)

C_{H2S} = Maximum offgas H₂S concentration, ppmv (scf/MMscf) = 200 ppmv

Q_{offgas} = Offgas flowrate through scrubber (scfm)

OFFSET REQUIREMENTS

Project Offsets

Offsets will be required for POCs and NO_x as specified in District Rule 2-2-302. Anheuser-Busch intends to apply contemporaneous emission reduction credits (ERCs) of POCs (Table 1) to offset the increase in NO_x emissions from the flare by permanently removing from service sources comprising the Alcohol Distillation process, currently in operation at the Fairfield brewery. Table 1 provides a summary of POC emissions (three-year actual) that will be offset as a result of the removal of the Alcohol Distillation sources. No RACT adjustment has been applied since the Alcohol Distillation process because it is unique to the Anheuser-Busch Fairfield Brewery and the unit is considered to be operating with RACT. Anheuser-Busch intends to apply contemporaneous emission reduction credits (ERCs) of POCs to offset the increase in NO_x emissions from the flare for the BERS project at the offset ratio set out in Regulation 2-2-302. Based on the 1.15 to 1.0 offset ratio, a total of 0.69 tons of POC ERCs will be required for the BERS project to offset the 0.6 tpy increase in NO_x.

Small Facility Bank Reimbursement

Because the potential to emit (PTE) POC at Anheuser-Busch is greater than 35 tpy, this project triggers Regulation 2-2-302.3, which requires reimbursement of emission reduction credits (ERCs) obtained from the District's Small Facility Bank (SFB). Per the 09/27/2007 memo from David Brunelle, the total ERCs received by Anheuser-Busch from the District's Small Facility Bank is 25.622 tons. Anheuser-Busch has reimbursed this amount to the SFB: the District received 8.692 tpy POC credits (Certificate of Deposit No.

1059) and 18,000 tpy POC credits (Certificate of Deposit No. 1060), both dated 10/16/07 for a total of 26.692 tons; per Regulation 2-2-302, these offset the District's Small Facility Bank at a 1.0:1.0 ratio (see Attachment 2).

The following Table Summarizes Project and Small Facility Bank Increases, Decreases and Offsets:

Following is a summary of all emissions increases, decreases, and offsets required.

	NOx	SO2	PM10	POC	CO
Increases					
S2, Boiler		2.2			
S3, Boiler		2.2			
S166, Bio-Energy recovery System					
S167, Flare	0.6		0.3	0.7	3.6
Decreases					
S139, Distillation Truck Loadout				0.9	
S63, Alcohol Distillation Column Condenser				2.03	
S65, Alcohol Distillation Rectifying Column Condenser				2.03	
S66, Alcohol Day Tank 1				0.01	
S67, Alcohol Day Tank 2				0.01	
S68, Alcohol Storage Tank 1 (15,000 Gal)				0.01	
S69, Alcohol Storage Tank 2 (15,000 Gal)				0.01	
S70, Alcohol Storage Tank 1 (3,200 Gal)				0.001	
S71, Alcohol Storage Tank 2 (3,200 Gal)				0.001	
Total	+0.6	+4.4	+0.3	-3.492	+3.6
Offset of NOx with POC (1.0:1.15 Ratio)	+0.6			4.302	
Previous projects					
Application 7054				0.294	
Application 7209				2.053	
Application 7731				0.588	
Application 9737				19.471	
Application 10483				0.294	
Application 14637				0.004	
Application 18551				0.706	
Application 18981				2.357	
Application 15474				0.291	
Emissions requiring offsets				26.058	
Offsets required (1.0:1.0 ratio)				26.058	
Offsets required (1.0:1.15 ratio)	+0.6				

The Small Facility Bank offsets will come from the following certificates:

Certificate Number	Owner of Record	Amount tpy
1059	Ball Metal	8.692
1060	Gaylord Container	<u>18.000</u>
Total		26.692

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

As a result of burning biogas, emissions of SO₂ from Boiler #2 and Boiler #3 will exceed 10 lb/highest day and trigger Best Available Control Technology (BACT). The highest daily emissions of SO₂ are based on the highest achievable biogas consumption rate of 500 cfm (22.5 MMBtu/hr). No specific BACT control levels designated as either "technologically feasible/cost effective" or "achieved in practice" are specified for SO₂ for boilers fired on landfill gas or digester gas (a type of biogas) in the District's BACT/TBACT Workbook (Guideline Revision 2, Document No. 17.5.1, 4/21/1993). The typical control technologies identified for SO₂, corresponding to technologically feasible/cost effective BACT, include: a Spray Dryer + Baghouse; or Fuel Gas Pretreatment System. The proposed biogas pretreatment system proposed as BACT for the boilers fired on biogas is expected to meet, or exceed, the BACT 1 guideline for boilers fired on digester gas. The FeCl₂ biogas pretreatment process will be designed and operated to reduce the H₂S concentration of the biogas to 200 parts per million, volume basis (ppmv), or less.

Emissions of NO_x, CO, PM₁₀, SO₂, and POC from the flare during a startup, shutdown or malfunction event could, potentially, exceed 10 lb/day and, therefore, also trigger Best Available Control Technology (BACT). The highest daily emissions are based on the highest achievable biogas consumption rate of 500 cfm and 22.5 MMBtu/hr. BACT guidelines for a flare burning digester gas or landfill gas from non-hazardous waste landfill are published in the BAAQMD's BACT/TBACT Workbook (Revision 1, Document No. 80.1., December 16, 1991). The enclosed ground level flare will be designed and operated to meet BACT for all pollutants. BACT 1 will be applied to NO_x emissions. For all other criteria pollutants BACT 2 will be applied.

TOXIC RISK SCREENING

This application required a Toxics Risk Screening because annual H₂S emissions are projected to be 0.9 tpy, which exceeds the 390 lb/year toxic risk trigger level.

Toxic Pollutant Emitted	Emission Rate for S-1 (lb/yr)	Risk Screening Trigger (lb/yr)
H ₂ S (Hydrogen Sulfide)	1,800	390

S-166 passed the Health Risk Screening Analysis (HRA) conducted on September 23, 2007 by the District's Toxic Evaluation Section. H₂S does not have any associated carcinogenic effects. The highest non-carcinogenic risks were obtained (see attached 9/18/07 interoffice memo from C. Fortney) by modeling emissions from a rural system. For the maximum annual chronic residential impact, the model resulted in a non-cancer hazard quotient of approximately 0.006; for the maximum 1-hr acute residential impact, the model resulted in a non-cancer hazard quotient of approximately 0.258. For the maximum annual chronic non-residential impact, the model resulted in a non-cancer hazard quotient of approximately 0.021; for the maximum 1-hr acute non-residential impact, the model resulted in a non-cancer hazard quotient of approximately 0.3. The maximum chronic and acute non-carcinogenic hazard quotient for the proposed project is calculated to be less than 1, which is consistent with Regulation 2, Rule 5.

STATEMENT OF COMPLIANCE

S-166 Bio-Energy Recovery System (BERS), Abated by A-166 Ferrous Chloride Injection, and A-167 Scrubber, is expected to comply with Regulation 8 Organic Compounds, Rule 2, Miscellaneous Operations: BERS is a miscellaneous operation, as defined by Rule 8-2-201. The biogas is primarily comprised of methane and carbon dioxide, which are not POCs. Therefore, emissions of volatile organic compounds are expected to be well under the combined limit of 6.8 kg. (15 lbs.) per day and containing a concentration of not more than 300 ppm total carbon on a dry basis.

S-166 Bio-Energy Recovery System (BERS), Abated by A-166 Ferrous Chloride Injection, and A-167 Scrubber, is expected to comply with Regulation 9, Rule 1, Section 301, which requires that ground level SO₂ concentrations, at or beyond the property boundary of the facility, not exceed 0.5 parts per million (ppm) continuously for 3 consecutive minutes, or 0.25 ppm averaged over 60 consecutive minutes, or 0.05 ppm averaged over 24 hours. Regulation 9, Rule 1, Section 302, specifies that the exhaust gas stream from any source may not contain SO₂ in excess of 300 ppm (dry). In order for the exhaust SO₂ to exceed the standard, the fuel H₂S would have to exceed 0.2 percent (volume basis). The biogas H₂S will not exceed 200 ppmv (0.02 %v), so the SO₂ concentration standard will not be exceeded.

S-166 Bio-Energy Recovery System (BERS), Abated by A-166 Ferrous Chloride Injection, and A-167 Scrubber, is expected to comply with Regulation 9, Rule 2, which limits ground level concentrations of H₂S to 0.06 ppm or less, averaged over three consecutive minutes or 0.03 ppm or less averaged over 60 consecutive minutes.

This application is considered to be ministerial under the District's CEQA Regulation 2-1-311 because the evaluation is a ministerial action conducted using the fixed standards and objective measurements outlined in the District's Permit Handbook, Chapter 8.2.

This project is over 1000 feet from the nearest school and is therefore not subject to the public notification requirements of Reg 2-1-412.

PSD, NSPS, and NESHAPS are not triggered or do not apply to this project.

RECOMMENDATION

Issue An Authority to Construct for:

S-166 Bio-Energy Recovery System (BERS), Abated by A-166 Ferrous Chloride Injection, Custom Made and A-167 Scrubber, Model U.S. Filter Lo/Pro, and

S-167 Flare, Enclosed, John Zink, Model ZTOF

CONDITIONS

Conditions for S-166 Bio-Energy Recovery System (BERS) and S-167 Flare, at Plant #606, A#15996

1. Owner/operator shall limit biogas flow from the reactor to 864,000 cubic feet per day, or less, during any rolling 12 consecutive month period. [Basis: Cumulative Increase]
2. Owner/operator shall limit boiler biogas H₂S concentration to 200 ppmv, or less, on an annual average basis prior to blending with boiler fuel. [Basis: Cumulative Increase]

3. Owner/operator shall limit the emission of H₂S from the offgas scrubber (A-167) to 10 ppmv, or less. [Basis: Cumulative Increase]
4. Owner/operator shall maintain the minimum temperature of S-167 flare at not less than 1400 degrees F.
 - a. This condition shall only apply when the biogas supply valves to all boilers are closed and biogas flaring exceeding 300 cfm occurs longer than 15 minutes continuously.
 - b. S-167 flare shall be equipped with automatic gas flow and combustion controls.
 - c. S-167 flare shall be equipped with a continuous temperature monitor and recording device.

[Basis: Cumulative Increase and Monitoring]

5. Owner/operator shall install and maintain an alarm system that will alert the owner/operator when the conditions of Condition 8, Part (a) are not met and record these flare events in a District approved log. [Basis: Monitoring]
6. Owner/operator shall limit the flaring of biogas to no more than 10%, by volume, of the total BERS biogas production during any rolling 52 consecutive week period. [Basis: Cumulative Increase]
7. Owner/operator shall perform monitoring and recordkeeping as follows:
 - Owner/operator shall demonstrate compliance with condition #3 and condition #5 by monitoring biogas concentration for H₂S concentration on a weekly basis with Draeger tubes (or equivalent).
 - Owner/operator shall record biogas concentration monitoring results in a District approved log.
 - Owner/operator shall monitor and record biogas flaring on a weekly basis in a District approved log.
 - Compliance for the above will be determined by a rolling 52 consecutive week period.
 - Owner/operator shall record throughput of the biogas flow from the reactor on a daily basis in a District approved log.
 - Records shall be maintained for a period of 5 years and made available to District staff upon request. [Basis: Recordkeeping]

ATTACHMENT 1

BERS Project Emissions Summary

Source(s)	Existing Boilers #2 and #3 Burning Biogas		Flare ¹		BERS
Source No.	S-2 and S-3		S-167		S-
Abatement Device	Biogas Desulfurization (A-166)		Biogas Desulfurization (A-166)		Offgas (A-
Pollutant	12-Month	Short-Term ²	12-Month	Short-Term ³	12-Month
NO _x	<i>no increase</i>		0.6 tpy	6.75E-05 lb/hr	<i>not emitted</i>
CO	<i>no increase</i>		2.0 tpy	2.25E-04 lb/hr	<i>not emitted</i>
PM ₁₀	<i>no increase</i>		0.3 tpy	3.38E-05 lb/hr	<i>not emitted</i>
SO ₂	4.4 tpy	4.99E-04 lb/hr	0.4 tpy	4.99E-05 lb/hr	<i>not emitted</i>
POC	<i>no increase</i>		0.7 tpy	7.88E-05 lb/hr	<i>not emitted</i>
H ₂ S	<i>no increase</i>		<i>not emitted</i>		0.9 tpy

¹ Flare emissions, except for SO₂, are conservatively estimated using AP-42 emission factors based on a flare utilization of 10 percent of the maximum annual BERS biogas production (500 cfm at 8,760 hours per year).

² Short-term emissions are calculated from 12-month emissions based on 8,760 hours per year operation.

Table 1 Reduction in POC Emissions from Removal of Alcohol Distillation Sources

Source No.	Source Description	POC Emission Offsets 3-Year Actual Average (tpy)	Emission Factor Source (AP-42)
S-139	Distillation Truck Loadout	0.09	Section 5.2 (1/95)
S-63	Alcohol Distillation Column Condenser	2.03	Table 4-7-1 (2/80)
S-65	Alcohol Distillation Rectifying Column Condenser	2.03	Table 4-7-1 (2/80)
S-66	Alcohol Day Tank 1	0.01	Table 4-7-1 (2/80)
S-67	Alcohol Day Tank 2	0.01	Table 4-7-1 (2/80)
S-68	Alcohol Storage Tank 1 (15,000 gal)	0.01	Table 4-7-1 (2/80)
S-69	Alcohol Storage Tank 2 (15,000 gal)	0.01	Table 4-7-1 (2/80)
S-70	Alcohol Storage Tank 1 (3,200 gal)	0.001	Table 4-7-1 (2/80)
S-71	Alcohol Storage Tank 2 (3,200 gal)	0.001	Table 4-7-1 (2/80)
Total POC Offset		4.18 tpy	

Craig Ullery

From: Bradley Angel [bradley@greenaction.org]
Sent: Tuesday, October 23, 2007 3:37 PM
To: Jack Broadbent; Brian Bateman; Richard Lew; Craig Ullery; Wafaa Aborashed; Amy Cohen; Allison Cabrera
Subject: Greenaction & Healthy San Leandro Comments in response to BAAQMD's "Notice" about Alco Iron & Metal Pyrolysis



ATT19717835.doc

Please see the attached comments submitted by Greenaction for Health and Environmental Justice and Healthy San Leandro Environmental Collaborative in response to the "Notice" issued by BAAQMD on the "Controlled Pyrolysis Cleaning Furnace" at Alco Iron and Metal Company in San Leandro.

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ANHEUSER-BUSCH

S-168 Can Line 40 Filler

Application No. 17041

May 12, 2008

INTRODUCTION

Anheuser-Busch is applying for an Authority to Construct for:

S-168 Can Line 40 Filler, Kroenes Can Filler, 1650 cans/minute

Anheuser-Busch (AB) is replacing the existing Can Line 40 Filler (S-154) with new Can Line 40 Filler. The previous filling Can Line 40 Filler (S-154) operations could only fill 12-ounce cans; the new unit will fill 12, 16, and 24-ounce cans.

EMISSIONS

Emissions from the new filling line are provided in Attachment 1. The current emissions from S-154 Can Line 40 Filler are 82.88 lb/day and 15.13 tpy at maximum production. The proposed emissions from S-168 Can Line 40 Filler vary, depending on the size of the cans being filled, with the filling of larger cans generating the higher emissions (Table 1). The highest emission rates are generated when the 24-ounce cans are filled, which are 106.26 lb/day and 19.40 tpy at maximum production (Table 2). Table 3 summarizes the emissions from the existing (S-154) can filling operation, which is 6.13 tpy POC based on a 3-year baseline, and the new can filling operation, which will be 12.96 tpy. The lower emission rate from the proposed new can filling line is due to the throughput limit, which will be imposed on this line. Although proposed S-168 Can Line 40 Filler has the potential for greater throughput, AB will limit the total annual throughput to 2,124,000 barrels of beer (1 barrel of beer = 31 gallons) through this filler.

The existing can and case coders associated with this operation (S-75, 76, and 120, which code the product containers and cases after filling), will not exceed their existing throughput limits of ink and solvent indicated in condition no. 16202.

BEST AVAILABLE CONTROL TECHNOLOGY

Best Available Control technology is triggered for S-168 since POC emissions exceed the 10 lb/day threshold per Regulation 2-2-301.

For POC destruction, carbon adsorption, wet scrubber, regenerative thermal oxidizer and catalytic oxidizer were considered for possible viable control measures. Carbon was found to be infeasible due to the low adsorption rate of ethanol. Calgon has indicated that 1%, by weight, of the ethanol will be adsorbed by carbon, which has a poor affinity for ethanol. Wet scrubbing with water is a feasible method but has a major drawback. The ethanol does not reliably remain in water for any long period and must be oxidized or otherwise destroyed or recaptured by other means. Using an on-site water treatment method to perform this task would only escalate cost beyond that of other feasible control measures. The two control measures found to be suitable for this proposed project were the regenerative thermal oxidizer and the catalytic oxidizer.

Attachments 2 and 3 are the cost effectiveness calculations for a regenerative thermal oxidizer and catalytic oxidizer, respectively, based on the District's CONCOST program and the maximum flowrate of 60,000 acfm. The maximum flowrate for each of the two filler lines was determined as follows:

$$\begin{aligned}\text{Volumetric Air flow per line} &= 150 \text{ feet/minute}^1 \times 196 \text{ square/feet}^2 \\ &= 29,400 \text{ ft}^3/\text{minute} \text{ (rounded up to } 30,000 \text{ ft}^3/\text{minute)}\end{aligned}$$

¹The capture velocity should be between 100 and 200 fpm (Based on Method 204 velocity requirements and clean room design guidance in American Conference of Governmental Industrial Hygienists (ACGIH) Industrial Ventilation, A Manual of Recommended Practice, 22nd Edition, Table 3-1). The mid-point of 150 fpm was chosen.

²An enclosure with plan dimensions of 14' x 14' was chosen to be the most realistic size after considering the following constraints: (A) The enclosure had to be large enough for personnel to enter for inspection and operation, (B) the enclosure had to be large enough to prevent a safety hazard to personnel working in the filler area due to exposure to highly concentrated carbon monoxide (CO₂) gases used to blanket the filling area and (C) the enclosure had to be easily cleanable to minimize the possibility of biological contamination of the beer.

The cost effectiveness for abating 19.7 tpy POC for a regenerative thermal oxidizer is \$35,419/ton; the cost effectiveness for abating 19.7 tpy POC for a catalytic incinerator is \$36,458/ton. (U.S. EPA's OAQP Control Cost Manual factors were used for all except the initial cost of replacement parts & cost of parts replacement labor; for these AB used best engineering estimates). Therefore, since the cost effectiveness for controlling these emissions exceeds the \$17,500/ton POC reduced guidelines, the BACT determination for this project is that no additional control measures will be required. This determination is consistent with the EPA RACT/BACT/LAER Clearinghouse (RBLCL) finding for the Anheuser-Busch brewery in Houston. No BACT determination could be found in the CARB BACT Database for filling beer bottles or related processes.

Anheuser-Busch utilizes a number of POC minimization measures at its can and bottle fillers to minimize VOC emissions through controlling product loss, which is the major source of VOC emissions.

- o Filler bowls are blanketed with CO₂, which minimizes ethanol emissions.
- o Implementation of enhanced training of packaging operators and supervisors to better understand the operation of the filling lines so that breakdowns, spillage, and wasted products can be minimized.
- o Development of packaging performance objectives and metrics related directly to reduction in spillage and wasted products.
- o Use of detection devices that check fill levels on the packaging lines, allowing for early detection of filler problems and less product loss, resulting in less VOC emissions.
- o Implementation of enhanced maintenance procedures for the fillers that will ensure fillers operate as designed, thus preventing breakdowns and minimizing product loss and VOC emissions.
- o Establishment, implementation, review and update of standard operating procedures (SOPs) for all areas of the plant to ensure efficient operation and minimization of production loss and VOC emissions.

Essentially, POC emissions result from the ethanol that is in the beer and it is in Anheuser-Busch's best interest to minimize the amount of product loss and, by extension, POC emissions. Therefore, BACT is determined to be compliance with Regulation 8 Rule 2.

OFFSET REQUIREMENTS

Offsets will be required for the 12.96 tpy POC emissions from the new filling line as specified in District Rule 2-2-302. Anheuser-Busch intends to use a combination of contemporaneous emission reduction credits (ERCs), banked emissions, and recently purchased offsets. The shutdown and permanent removal from service S-154 Can Line 40 Filler and ERC's remaining (1.39 tpy were used in A#15996) from the shutdown and permanent removal from service sources comprising the Alcohol Distillation process, currently in operation at the Fairfield brewery, will provide the contemporaneous emission reduction credits. According to a memo dated 4/2/08 from David Brunelle, Anheuser-Busch has 1.070 tpy POC banked emissions available. And, recently, 8.500 tpy POC offsets were transferred via National Offsets from Tri Valley Growers Container Division in Fremont, CA., to Anheuser-Busch. Table 1 provides a summary of project POC emissions, ERC's from the shutdown of S-154 (three-year actual), banked credits and banking certificate offsets. The Small Facility Bank was offset to 0 (zero) in A#15996.

The following Table Summarizes Project Increases, Decreases and Offsets (all units in TPY):

	NOx	SO2	POC	CO
Increases				
S168, Can Line 40 Filler			12.960	
Decreases				
S154, Can Line 40 Filler			- 6.130	
ERCs: Alcohol Distillation & Loadout Operations			-2.102	
Total			4.728	
			<u>4.135</u>	
Offsets Required (1.0:1.15 Ratio)			5.437	
Banked Credits (Remaining on Certificate 1060)			-1.070	
Banking Certificate 1101			-8.500	
Emissions Remaining on Banking Certificate 1060			0	
Emissions Remaining on Banking Certificate 1101			4.133	

Plant Cumulative Increase

POC: 0 tpy (existing) + 4.728 tpy (new) = 4.728 tpy

STATEMENT OF COMPLIANCE

S-168 bottle filling line 1 is subject to Regulation 8 Rule 2 Section 301 for Miscellaneous Operations. Emissions will not exceed 15 lb. and 300 ppm total carbon, dry basis, per day, from each source. The ppm of ethanol as total carbon is calculated to be less than 7 ppm (Table 2).

A Toxic Risk Screen Analysis is not required for S-168 since ethanol emissions will not exceed the 870,000 lb/yr trigger level.

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The project is deemed categorically exempt from CEQA by the City of Fairfield Department of Planning and Development because it involves replacement of existing mechanical bottling equipment with new, modern facilities, and involves negligible or no expansion of use beyond that existing at the brewery. (Ref: 04/03/2008 email).

This project is over 1000 feet from the nearest school and therefore is not subject to the public notification requirement of Regulation 2-1-412.

PSD, NSPS, and NESHAPS are not triggered.

Anheuser-Busch is a Title V facility; this source will be incorporated into the Title V permit upon the next revision/renewal.

RECOMMENDATION

Issue an Authority to Construct for:

S-168 Can Line 40 Filler, Kronos Can Filler, 1650 cans/minute

CONDITIONS

Permit conditions for S-168 Can Line 40 Filler, Anheuser-Busch, Plant #606, A#17041

1. The owner/operator shall not exceed 2,124,000 bbls of beer through S-168 in any 12-consecutive month period. [Basis: Cumulative Increase]
2. The owner/operator shall maintain records in a District-approved logbook on a monthly basis of beer throughput on this line. Records shall be maintained for a period of at least 5 years and made available upon request to District staff. [Basis: Recordkeeping]

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TABLE 1
Estimated Potential to Emit (PTE) VOC Emissions From New Can Line 40 Filler

Packaging Line	Container Size (ounces)	Filler Speed (cans/min.)	Maximum Throughput (barrels/yr.)	Emission Factor (lbs/1,000 barrels)	PTE VOC Emissions (lbs/day) ^a	PTE VOC Emissions (Tons/yr.) ^b
CL-40	12	1500	2,479,645	12.2 *	82.88	15.13
CL-40	12	1650	2,622,702	12.2 *	87.66	16.00
CL-40	16	1360	2,882,323	12.2 *	95.34	17.58
CL-40	24	1000	3,179,032	12.2 *	106.26	19.38

Existing filter emissions

Notes

(a) Estimated daily PTE VOC emissions (lbs/day) = (filler speed [containers per minute])
x (PTE hours of operation [mins per day]) x (container size [ounces/container]) x (0.00761 gals/ounce)/(barrel size [gals/barrel])
x (emission factor [lbs/1,000 barrels])

PTE hours of operation = 1440
Barrel size = 31 gallons

(b) Estimated annual PTE VOC emissions (Tons/yr.) = (PTE VOC emissions (lbs/day)) x (365 days/yr.) / (2000 lbs/ton)

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Table 2
Estimated Can Line 40 VOC/POC Concentration
Anheuser-Busch Brewing Company, Inc., Fairfield California

Packaging Line	Exhaust Parameters			Estimated VOC/POC Emission Rate ⁽¹⁾		PPM of Ethanol ⁽²⁾	PPM of Ethanol as Total Carbon ⁽³⁾
	Nearrest Root Fan Flow Rate ⁽⁴⁾ (SCFM)	Moisture Content ⁽⁵⁾ (ft ³)	Flow Rate ⁽⁶⁾ (DSCFM)	(lbs/day)	(tons/yr.)		
Can Line 40	50,000	510	49,490	106.26	19.4	12.7	6.6

Conversion Factors/Constants:

Standard temperature (R) =	527.67
Standard pressure (psia) =	14.7
Molecular weight of water (lbs/lb-moles) =	18
Ideal gas law constant "R" (ft ³ atm/lb-moles) =	0.7302
Molecular weight of C ₂ H ₅ OH (lb/lb-mol) =	46.07

Abbreviations:

Molecular weight of C ₂ (lb/lb-mol) =	24
Actual cubic feet per minute =	ACFM
Standard cubic feet per minute =	SCFM
Dry standard cubic feet per minute =	DSCFM
Dry air =	DA
Moist air =	MA

Notes:

(a) Flow rate (SCFM) = (flow rate (ACFM)) x ((standard temperature (R))/(actual temperature (R))) x ((actual pressure (psia))/(standard pressure (psia)))

Flow rate (ACFM) =	50,000 (2)
Actual temperature (R) =	527.67 (3)
Actual pressure (psia) =	14.7 (4)

(b) Moisture content (ft³ - vapor) = ((absolute humidity (lb-H₂O/lb-DA))/(humid volume (ft³-MA/lb-DA)))/(molecular weight of water (lb/lb-moles)) x ((ideal gas law constant "R" (ft³ atm/lb-mole R)) x (actual temperature (R)) / (actual temperature (R)) (actual pressure (psia)) / (14.7 (psia/atm))) x (flow rate (SCFM))

(c) Flow rate (DSCFM) = (flow rate (SCFM)) - (moisture content (ft³))

(d) PPM of ethanol (ppm) = ((emission rate (lbs/day)) x (1,000,000 ug/g)) / ((flow rate (DSCFM)) x (0.02832 m³.ft³) x (1440 min/day)) x (0.0245/molecular weight of C₂H₅OH)

(e) PPM of ethanol as total carbon (ppm) = (ppm of ethanol (ppm)) x ((molecular weight of C₂) / (molecular weight of C₂H₅OH))

ANHEUSER-BUSCH

**S-169 and S-170 Videojet XL 2000
Bottle Coders**

Application No. 18967

January 27, 2009

INTRODUCTION

Anheuser-Busch is applying for 2 new Videojet XL 2000 bottle coders at their facility in Fairfield, CA.

**S-169 Videojet Bottle Coder, Videojet XL 2000
S-170 Videojet Bottle Coder, Videojet XL 2000**

Videojet bottle coders print product codes directly onto the glass beer bottles produced at this facility.

EMISSIONS

Each Videojet bottle coder will use 25 gallons of ink (two different types) and 19 gallons of clean-up solvent annually:

$$\begin{aligned} \text{S-169: } & (6 \text{ gal/yr})(7.5 \text{ lb/gal}) + (19 \text{ gal/yr})(6.7 \text{ lb/gal}) + (19 \text{ gal/yr})(6.9 \text{ lb/gal}) \\ & = 303.4 \text{ lb POC/yr (0.152 tpy POC)} \end{aligned}$$

$$\begin{aligned} \text{S-170: } & (6 \text{ gal/yr})(7.5 \text{ lb/gal}) + (19 \text{ gal/yr})(6.7 \text{ lb/gal}) + (19 \text{ gal/yr})(6.9 \text{ lb/gal}) \\ & = 303.4 \text{ lb POC/yr (0.152 tpy POC)} \end{aligned}$$

Plant Cumulative Increase

$$0.0 \text{ tpy (existing)} + 0.304 \text{ tpy (new)} = 0.304 \text{ tpy POC}$$

Offsets

Because Anheuser-Busch is a Title V facility, offsets are triggered for POC. Regulation 2-2-302 requires offsets at a 1.15 to 1.0 ratio:

$$(0.304)(1.15) = 0.350 \text{ tons}$$

Anheuser-Busch currently has 4.133 tons POC emission credits in Banking Certificate No. 1124 which the above offsets will be deducted from.

STATEMENT OF COMPLIANCE

S-169 and S-170 are subject to Regulation 8, Rule 4, General Solvent and Surface Coating Operations. The sources will not emit more than 5 tpy VOC.

This project is over 1000 feet from the nearest school and therefore is not subject to the public notification requirement of Regulation 2-1-412.

The emissions of methyl alcohol and MEK do not trigger a toxic risk screen since emissions are below the 1.5E5 lb/yr. and 3.9E4 respective trigger levels.

This application is considered to be ministerial under the District's CEQA Regulation 2-1-311 because the evaluation is a ministerial action conducted using the fixed standards and objective measurements outlined in the District's Permit Handbook, Chapter 5.7.

BACT, PSD, NSPS, and NESHAPS are not triggered.

RECOMMENDATION

Issue A Permit to Operate for:

**S-169 Videojet Bottle Coder, Videojet XL 2000
S-170 Videojet Bottle Coder, Videojet XL 2000**

CONDITIONS

Permit conditions for S-169 and S-170 Videojet XL 2000 bottle coders, Anheuser-Busch, Plant #606, A#18967

1. The owner/operator shall limit POC emissions from each source to not more than 303.4 lbs of precursor organic compounds in any consecutive 12-month period. [Basis: Cumulative increase]
2. The owner/operator shall obtain written authorization from the District prior to using any inks other than Videojet 18-8200 and Videojet 16-8205 any clean-up material other than Videojet 16-8205. [Basis: Cumulative increase]
3. The owner/operator shall maintain a District approved logbook on an annual basis of the quantity of ink used and the amount of clean-up solvent used. The owner/operator shall maintain records for a period of at least 5 years from the date of entry and make them readily available to District staff upon request. [Basis: Recordkeeping]

ENGINEERING EVALUATION

Anheuser-Busch, Inc.

Plant: 606

Application: 21166

BACKGROUND

Anheuser-Busch is applying for an Authority to Construct/Permit to Operate a replacement pulse jet baghouse (A-51) that will abate particulate emissions from S-11 Grain Receiver.

A-51 Baghouse: Reverse Pulse Jet, Make Buhler, Model RPPR-18/8, 1600 CFM; Abating S-11: 80K Grain Receiver.

The new baghouse will replace the existing A-11 Baghouse (Reverse Pulse Jet, Make Buhler, Model ASFA-24/8, 1600CFM). The existing A-11 does not have an emission limit specified in the permit condition and has no emission source test data available. Therefore, A-11 is assumed to comply with the emission limit in Regulation 6-1-310, which is an outlet grain loading of 343 mg/dscm (0.15 grain/dscf). The proposed A-51 baghouse has the same flow rate capacity of 1,600 cfm as A-11 and is expected to achieve as great or greater collection efficiency, with a maximum outlet grain loading guarantee of 0.01 gr/dscf. Therefore, there will be no increase in PM₁₀ emissions from S-11.

EMISSIONS CALCULATION

As stated above, there will be no increase in PM₁₀ emissions from S-11.

TOXIC RISK SCREEN ANALYSIS

Not applicable.

CUMULATIVE INCREASE

There is no cumulative increase in emissions from S-11.

BACT

BACT is not triggered per Regulation 2-2-301 because there is no increase in emissions.

OFFSETS

Offsets are not required per Regulation 2-2-303.

STATEMENT OF COMPLIANCE

With the installation of A-51 Baghouse, S-11 is expected to continue to comply with Regulation 6-1-301 (Ringelmann No.1 Limitation), 305 (Visible Particles), 310 (Particulate Weight Limitation), and 311 (General Operations).

This project is categorically exempt from District CEQA Regulation 2-1-311 pursuant to Regulation 2-1-312.2 (Permit applications to install air pollution control or abatement equipment) and therefore is not subject to CEQA review.

The facility is not located within 1000 feet of the outer boundary of the nearest school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

A Toxics Risk Screening Analysis is not required since the proposed operation of A-51 will not result in any increase in toxic compound emissions. TBACT does not apply to this project.

BACT, Offsets, PSD, NSPS, and NESHAPS do not apply to this project.

PERMIT CONDITIONS

S-11, abated by the existing A-11 baghouse, is currently subject to Permit Condition 17176. After the installation of A-51 replacing A-11, S-11 will be subject to Permit Condition 17176 with the modification as shown in the underline/strikeout format below.

Since manufacturer's specifications indicate that the differential pressure at A-51 during normal operating condition shall be a value between 1 and 6 inches of water, the condition will be modified to include the monitoring of differential pressure to ensure proper operation of A-51 as recommended by the manufacturer. The monthly monitoring frequency will remain the same. The new baghouse is expected to achieve as great or greater emission reduction efficiency as the existing baghouse, and the compliance history of S-11 indicates no violations. Therefore, the monthly monitoring is considered sufficient for compliance assurance.

Permit Condition 17176

S-14, Grain Transfer Hopper as amended in A#13621:

1. Owner/operator shall monitor and record the differential pressure across the baghouse filter media abating this source not less than once per month when the system is operating. If the differential pressure is less than 1 inch of water or higher than 9 inches of water, the cause of this reading shall be investigated and remedied within 7 days of the observance. [Basis: Regulation 2-6-409.2]
2. Owner/operator shall maintain records of the pressure drop across the baghouse on a monthly basis in a District approved logbook. Records shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: Regulation 2-6-409.2]

S-36, Grain Dust Transfer, as amended in A#13621:

3. Owner/operator shall monitor and record the differential pressure across the baghouse filter media abating this source not less than once per month when the system is operating. If the differential pressure is less than 0.5 inch of water or higher than 6 inches of water, the cause of this reading shall be investigated and remedied within 7 days of the observance. [Basis: Regulation 2-6-409.2]

4. Owner/operator shall maintain records of the pressure drop across the baghouse on a monthly basis in a District approved logbook. Records shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: Regulation 2-6-409.2]

S-125, Precoat Tank; S-126, Body Feed Tank #1; and S-127, Body Feed Tank #2, as amended in A#13621:

5. Owner/operator shall monitor and record the differential pressure across the baghouse filter media abating this source not less than once per month when the system is operating. If the differential pressure is less than 0.25 inches of water or higher than 3 inches of water, the cause of this reading shall be investigated and remedied within 7 days of the observance [Basis: Regulation 2-6-409.2]

6. Owner/operator shall maintain records of the pressure drop across the baghouse on a monthly basis in a District approved logbook. Records shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: Regulation 2-6-409.2]

S-134, ACP Air Pallet Unloader; S-137, ACP Slurry Mix Tank as amended in A#13621:

7. Owner/operator shall monitor and record the differential pressure across the baghouse filter media abating this source not less than once per month when the system is operating. If the differential pressure is less than 0.5 inches of water or higher than 6 inches of water, the cause of this reading shall be investigated and remedied within 7 days of the observance [Basis: Regulation 2-6-409.2]

8. Owner/operator shall maintain records of the pressure drop across the baghouse on a monthly basis in a District approved logbook. Records shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: Regulation 2-6-409.2]

S-130, D.E. Silo, as amended in A#13621:

9. Owner/operator shall monitor and record the differential pressure across the baghouse filter media abating this source not less than once per month when the system is operating. If the differential pressure is less than 0.5 inches of water or higher than 4 inches of water, the cause of this reading shall be investigated and remedied within 7 days of the observance [Basis: Regulation 2-6-409.2]

10. Owner/operator shall maintain records of the pressure drop across the baghouse on a monthly basis in a District approved logbook. Records shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: Regulation 2-6-409.2]

S-11, Grain Unloading, as amended in A#21166:

11. Owner/operator shall monitor and record the differential pressure across the baghouse filter media abating this source not less than once per month when the system is operating. If the differential pressure is less than 1 inch of water or higher than 6 inches of water, the cause of this reading shall be investigated and remedied within 7 days of the observance. [Basis: Regulation 2-6-409.2]

12. Owner/operator shall maintain records of the pressure drop across the baghouse on a monthly basis in a District approved logbook. Records shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: Regulation 2-6-409.2]

RECOMMENDATION

Issue an Authority to Construct to Anheuser-Busch for the following abatement device:

A-51 Baghouse: Reverse Pulse Jet, Make Buhler, Model RPPR-18/8, 1600 CFM; Abating S-11: 80K Grain Receiver.

Xuna Cai
Air Quality Engineer
Engineering Division

Date

**ENGINEERING EVALUATION
Anheuser-Busch, Inc.
Plant: 606
Application: 23185**

BACKGROUND

Anheuser-Busch is applying for an Authority to Construct/Permit to Operate a replacement pulse jet baghouse (A-54) that will abate particulate emissions from S-14 Grain Receiver.

A-54 Baghouse, Reverse Pulse Jet, Make Buhler, Model RPPR-14/6, 1600 CFM;
Abating S-14, Grain Receiver.

The new baghouse will replace the existing A-14 Baghouse (Reverse Pulse Jet, Make Buhler, Model ASFA, 1600CFM). The existing A-14 does not have an emission limit specified in the permit condition and has no emission source test data available. Therefore, A-14 is assumed to comply with the emission limit in Regulation 6-1-310, which is an outlet grain loading of 343 mg/dscm (0.15 grain/dscf). The proposed A-54 baghouse has the same flow rate capacity of 1,600 cfm as A-14 and is expected to achieve as great or greater collection efficiency, with a maximum outlet grain loading guarantee of 0.01 gr/dscf. Therefore, there will be no increase in PM₁₀ emissions from S-14.

EMISSIONS CALCULATION

As stated above, there will be no increase in PM₁₀ emissions from S-14.

TOXIC RISK SCREEN ANALYSIS

Not applicable.

CUMULATIVE INCREASE

There is no cumulative increase in emissions from S-14.

BACT

BACT is not triggered per Regulation 2-2-301 because there is no increase in emissions.

OFFSETS

Offsets are not required per Regulation 2-2-303.

STATEMENT OF COMPLIANCE

With the installation of A-54 Baghouse, S-14 is expected to continue to comply with Regulation 6-1-301 (Ringelmann No.1 Limitation), 305 (Visible Particles), 310 (Particulate Weight Limitation), and 311 (General Operations).

This project is categorically exempt from District CEQA Regulation 2-1-311 pursuant to Regulation 2-1-312.2 (Permit applications to install air pollution control or abatement equipment) and therefore is not subject to CEQA review.

The facility is not located within 1000 feet of the outer boundary of the nearest school and is therefore not subject to the public notification requirements of Regulation 2-1-412.

A Toxics Risk Screening Analysis is not required since the proposed operation of A-54 will not result in any increase in toxic compound emissions. TBACT does not apply to this project.

BACT, Offsets, PSD, NSPS, and NESHAPS do not apply to this project.

PERMIT CONDITIONS

S-14, abated by the existing A-14 baghouse, is currently subject to Permit Condition 17176. After the installation of A-54 replacing A-14, S-14 will be subject to Permit Condition 17176 with the modification as shown in the underline/strikeout format below.

Since manufacturer's specifications indicate that the differential pressure at A-54 during normal operating condition shall be a value between 1 and 6 inches of water, the condition will be modified to include the monitoring of differential pressure to ensure proper operation of A-54 as recommended by the manufacturer. The monthly monitoring frequency will remain the same. The new baghouse is expected to achieve as great or greater emission reduction efficiency as the existing baghouse, and the compliance history of S-14 indicates no violations. Therefore, the monthly monitoring is considered sufficient for compliance assurance.

COND# 17176 -----

S-14, Grain Transfer Hopper as amended in A#~~13624~~23185:

1. Owner/operator shall monitor and record the differential pressure across the baghouse filter media abating this

source not less than once per month when the system is operating. If the differential pressure is less than 1 inch of water or higher than ~~9~~ 6 inches of water, the cause of this reading shall be investigated and remedied within 7 days of the observance. [Basis: Regulation 2-6-409.2]

2. Owner/operator shall maintain records of the pressure drop across the baghouse on a monthly basis in a District approved logbook. Records shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: Regulation 2-6-409.2]

RECOMMENDATION

Issue an Authority to Construct to Anheuser-Busch for the following abatement device:

A-54 Baghouse, Reverse Pulse Jet, Make Buhler, Model RPPR-14/6, 1600 CFM;
Abating S-14, Grain Receiver.

By: _____ Date:
Faye Bruno
Air Quality Engineer II

**Engineering Evaluation
Anheuser-Busch, Inc., Plant 606
Application 23812**

BACKGROUND

Anheuser-Busch, Inc. is requesting a change in permit conditions for the following source:

S-137 Slurry Mix Tank

Anheuser-Busch, Inc. is currently using silica gel as a chill-proof material but intends to begin using tannin as well. The change in chill-proof material will not cause an increase in emissions. The proposed change in permit conditions would be to use “chill-proof material” in place of “silica gel”, noting that the material may be either silica gel or tannin.

EMISSIONS SUMMARY

There will be no increase in throughput, and thus no increase in emissions from this project.

PLANT CUMULATIVE INCREASE

There will be no increase in emissions.

TOXIC RISK SCREENING

A risk analysis was not required for this application.

BACT

BACT is not triggered.

OFFSETS

Offsets are not required.

STATEMENT OF COMPLIANCE

S-137 will continue to comply with Regulation 6, Particulate Matter, Rule 1, General Requirements .

This project is considered to be ministerial under District's CEQA Regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emission factors (MOP Chapter 2.3) and therefore is not discretionary as defined by CEQA.

THEORY

Consider a system of two particles, each of mass m , moving in a uniform magnetic field B in the z -direction. The particles are initially at rest and are then subjected to a constant force F in the x -direction.

The force on each particle is given by

$$F = qvB$$

PROBLEM

Two particles, each of mass m and charge q , are initially at rest and are then subjected to a constant force F in the x -direction. The particles move in a uniform magnetic field B in the z -direction.

The particles move in a circular path of radius r in the xy -plane. The angular velocity of the particles is ω .

The particles move in a circular path of radius r in the xy -plane. The angular velocity of the particles is ω .

SOLUTION

The force on each particle is given by $F = qvB$. The particles move in a circular path of radius r in the xy -plane. The angular velocity of the particles is ω .

The force on each particle is given by $F = qvB$. The particles move in a circular path of radius r in the xy -plane. The angular velocity of the particles is ω .

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The force on each particle is given by $F = qvB$.

The particles move in a circular path of radius r in the xy -plane. The angular velocity of the particles is ω .

ANSWER

The particles move in a circular path of radius r in the xy -plane. The angular velocity of the particles is ω .

The force on each particle is given by $F = qvB$.

ENGINEERING EVALUATION

Anheuser-Busch Inc

Plant No. 606

Application No. 26402

BACKGROUND

Anheuser-Busch, Inc has requested to obtain Permits to Operate for the following equipment:

S-177 Videojet Bottle Coder, Model 170i, Can Line 40

S-178 Videojet Bottle Coder, Model Excel 2000, Can Line 50

The above equipment is located at 3101 Busch Drive, Fairfield, CA 94534.

This equipment was discovered to be unpermitted during a June 4, 2014 inspection. It was also discovered that some equipment, which was no longer in operation, still had valid permits. The facility believes when some of the other equipment was brought offline, the wrong sources were inactivated. As a result of the June 4th inspection, permits for S-119, 138, 143, 144 and 145 have all been cancelled. The new sources S-177 and S-178 are actually pending replacement at this time, and will likely be removed within 6-months. Even so, for now they will be added to the facility wide POC emission bubble until the replacement is complete. The printers at this facility will remain subject to existing condition number 16202, which will be updated to reflect the new sources.

For purposes of assessing application fees, no back fees/late fees will be charged. The unpermitted equipment seems to have been an oversight by the facility which was exacerbated by the outdated wording on the District permit. Furthermore, because the facility has been maintaining permits for sources which are no longer in operation, and the facility has therefore been paying extra annual renewal fees over the past 5 years, no additional back fees are deemed appropriate.

EMISSIONS CALCULATIONS

The new sources will operate under an existing bubble limit of 17,370 lb/yr of POC and 603 lb/yr NPOC which is established under permit condition 16202. Anheuser-Busch has requested that the limiting condition remain unchanged. Therefore, this application will not result in any increase in emissions.

PLANT CUMMULATIVE INCREASE

Anheuser-Busch at “3101 Busch Drive, Fairfield, CA 94534” (Plant No. 606) is an existing facility. Table 1 summarizes the cumulative increases in criteria pollutant emissions that will result at Plant 606 from this application.

Table 1. Cumulative increases in tons/year

Pollutants	Current Emissions (TPY)	New Emissions (TPY)	New Total Emissions (TPY)
POC	39.586	0.000	39.586
NO _x	0.671	0.000	0.671
SO ₂	4.403	0.000	4.403
CO	3.612	0.000	3.612
PM ₁₀	0.412	0.000	0.412

TOXIC RISK SCREENING

The new videojet printers use the same solvent-based ink as the other printers at this facility. Based on the maximum allowable usage, Table 2 below summarizes that maximum emissions of toxic air contaminants for all printers under the bubble condition. These facility wide toxic emissions will not increase as a result of this application, as the equipment will continue to operate under the previously established bubble. The hourly emission rates listed are based on operation 24 hours/day and 7 days/week, as stated in the S Forms. Since the total emissions do not exceed any trigger levels, each source is expected to be well below the trigger level for any toxic air contaminant. The full calculations can be found in Appendix A.

Table 2. Toxic Air Contaminant (TAC) emissions and trigger levels

HAP	Annual Emissions (lb/yr)	Chronic Trigger Levels (lb/yr)	Chronic Triggered?	Hourly Emissions (lb/hr)	Acute Trigger Levels (lb/hr)	Acute Triggered?
IPA	302	2.7E+05	no	0.034	7.10E+00	no
MEK	10891	/	no	1.24	2.90E+01	no

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

In accordance with Regulation 2, Rule 2, Section 301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of POC, NPOC, NO_x, CO, SO₂ or PM₁₀. With a bubble emission limit of 17,320 lb/yr of POC across 15 printers, the maximum emissions from each source are expected to be approximately 3.2 lb/day of POC, well below the trigger level for BACT.

OFFSETS

Offsets must be provided for any new or modified source at a facility that emits more than 10 tons per year of POC or NO_x per Regulation 2, Rule 2, Section 302. PM₁₀ and SO₂ offset requirements apply only to major facilities with a cumulative increase, minus contemporaneous emission reduction credits, in excess of 1 ton/year since April 5, 1991 per Regulation 2, Rule 2, Section 303.

Anheuser-Busch at "3101 Busch Drive, Fairfield, CA 94534" (Plant No. 606) is an existing facility. This application constitutes no increase in emissions. Therefore, offsets are not required.

STATEMENT OF COMPLIANCE

The new sources are subject to Regulation 8, Rule 4: General Solvent and Surface Coating Operations. The sources will not emit more than 5 tpy each, and are therefore in compliance with the Rule.

The project is considered to be ministerial under the District's CEQA regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emissions factors and therefore is not discretionary as defined by CEQA (BAAQMD Permit Handbook, Chapter 5.7).

The project is over 1,000 feet from the nearest school and therefore is not subject to the public notification requirements of Reg. 2-1-412.

A Toxics Risk Screening Analysis is not required due to the emissions at the rates discussed above.

PSD, BACT, Offsets, NSPS, and NESHAPS are not triggered.

PERMIT CONDITIONS

Condition No. 16202 -----

The following permit condition 16202, as amended in A#11782, A#13621 and A#14949 is further amended as follows for S-75, 76, 77, 78, 120, 128, 131, 132, 133, 146, 147, 161, 162, 171, 172, 173, 174, 175, 176, 177 and 178, Anheuser-Busch, Plant #606, in A#26426:

1. Owner/operator shall not exceed the following limits for all sources combined in any consecutive 12-month period:
 - a) Ink 1,339 gallons
 - b) Solvent thinner 569 gallons
 - c) Acetone 90 gallons[Basis: Cumulative Increase]
2. Owner/operator shall not use materials other than those materials specified in Part 1 without first obtaining written authorization from the District. [Basis: Cumulative Increase]
3. Owner/operator shall not exceed 17,370 pounds POC emissions combined from these sources in any consecutive 12-month period. Owner/operator shall not exceed 603 pounds NPOC emissions combined from these sources in any consecutive 12-month period. Owner/operator shall not use materials which increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5. [Basis: Cumulative Increase, Toxics]
4. Owner/operator shall maintain a District approved logbook on a monthly basis of the following:
 - a. Type and monthly usage of all POC-containing materials;
 - b. Type and monthly usage of all NPOC-containing materials;
 - c. If a POC-containing material other than those specified in Part 1 is authorized by the District, mass emission calculations demonstrating compliance with the POC emission limit in Part 3 shall be recorded;
 - d. Running totals of 12-month emissions of POC and NPOCRecords shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: recordkeeping]

End of Conditions

RECOMMENDATION

Issue a Permit to Operate to Anheuser-Busch, Inc for the following equipment:

S-177 Videojet Bottle Coder, Model 170i, Can Line 40

S-178 Videojet Bottle Coder, Model Excel 2000, Can Line 50

By: Simon Margolis
Simon Margolis
Air Quality Engineer

Date: 4/26/2016

ENGINEERING EVALUATION

Anheuser-Busch Inc

Plant No. 606

Application No. 26426

BACKGROUND

Anheuser-Busch, Inc has requested to obtain an Authority to Construct and/or Permit to Operate for the following equipment:

S-171 Videojet Bottle Coder, Model VJ1620, Can Line 40
S-172 Videojet Bottle Coder, Model VJ1620, Can Line 40
S-173 Videojet Bottle Coder, Model VJ1620, Can Line 50
S-174 Videojet Bottle Coder, Model VJ1620, Can Line 50
S-175 Videojet Bottle Coder, Model VJ1620, Can Line 40
S-176 Videojet Bottle Coder, Model VJ1620, Can Line 50

The new sources listed above will replace the following currently permitted videojet coders:

S-75 Videojet Coder
S-76 Videojet Coder
S-77 Videojet Coder
S-78 Videojet Coder
S-146 Bottle Label Coder
S-147 Bottle Label Coder

The above equipment is located at 3101 Busch Drive, Fairfield, CA 94534.

The application was filed under the accelerated permitting program. As of today, new printers for line 50 have all been installed, while printer installation for line 40 is planned for late November. The new printers are currently being tested at the facility. The existing printers will remain online until the new printers have been successfully vetted. The new sources will eventually fully replace the previously permitted equipment. The printers at this facility will remain subject to existing condition number 16202, which will be updated to reflect the new sources.

EMISSIONS CALCULATIONS

The new sources will operate under an existing bubble limit of 17,370 lb/yr of POC and 603 lb/yr NPOC which is established under permit condition 16202. Anheuser-Busch has requested that the limiting condition remain unchanged. Therefore, this application will not result in any increase in emissions.

PLANT CUMMULATIVE INCREASE

Anheuser-Busch at “3101 Busch Drive, Fairfield, CA 94534” (Plant No. 606) is an existing facility. Table 1 summarizes the cumulative increases in criteria pollutant emissions that will result at Plant 606 from this application.

Table 1. Cumulative increases in tons/year

Pollutants	Current Emissions (TPY)	New Emissions (TPY)	New Total Emissions (TPY)
POC	39.586	0.000	39.586
NO _x	0.671	0.000	0.671
SO ₂	4.403	0.000	4.403
CO	3.612	0.000	3.612

PM ₁₀	0.412	0.000	0.412
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TOXIC RISK SCREENING

The new videojet printers use a similar solvent-based ink as the old printers did. Based on the maximum allowable usage, Table 2 below summarizes that maximum emissions of toxic air contaminants for all printers under the bubble condition. The hourly emission rates listed are based on operation 24 hours/day and 7 days/week, as stated in the S Forms. Since the total emissions do not exceed any trigger levels, each source is expected to be well below the trigger level for any toxic air contaminant. The full calculations can be found in Appendix A.

Table 2. Toxic Air Contaminant (TAC) emissions and trigger levels

HAP	Annual Emissions (lb/yr)	Chronic Trigger Levels (lb/yr)	Chronic Triggered?	Hourly Emissions (lb/hr)	Acute Trigger Levels (lb/hr)	Acute Triggered?
IPA	302	2.7E+05	no	0.034	7.10E+00	no
MEK	10891	/	no	1.24	2.90E+01	no

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

In accordance with Regulation 2, Rule 2, Section 301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of POC, NPOC, NO_x, CO, SO₂ or PM₁₀. With a bubble emission limit of 17,320 lb/yr of POC across 15 printers, the maximum emissions from each source are expected to be approximately 3.2 lb/day of POC, well below the trigger level for BACT.

OFFSETS

Offsets must be provided for any new or modified source at a facility that emits more than 10 tons per year of POC or NO_x per Regulation 2, Rule 2, Section 302. PM₁₀ and SO₂ offset requirements apply only to major facilities with a cumulative increase, minus contemporaneous emission reduction credits, in excess of 1 ton/year since April 5, 1991 per Regulation 2, Rule 2, Section 303.

Anheuser-Busch at “3101 Busch Drive, Fairfield, CA 94534” (Plant No. 606) is an existing facility. This application constitutes a modification with no increase in emissions. Therefore, offsets are not required.

STATEMENT OF COMPLIANCE

The new sources are subject to Regulation 8, Rule 4: General Solvent and Surface Coating Operations. The sources will not emit more than 5 tpy each, and are therefore in compliance with the Rule.

The project is considered to be ministerial under the District's CEQA regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emissions factors and therefore is not discretionary as defined by CEQA (BAAQMD Permit Handbook, Chapter 5.7).

The project is over 1,000 feet from the nearest school and therefore is not subject to the public notification requirements of Reg. 2-1-412.

A Toxics Risk Screening Analysis is not required due to the emissions at the rates discussed above.

PSD, BACT, Offsets, NSPS, and NESHAPS are not triggered.

PERMIT CONDITIONS

Condition No. 16202 -----

The following permit condition 16202, as amended in A#11782, A#13621 and A#14949 is further amended as follows for S-75, 76, 77, 78, 120, 121, 128, 131, 132, 133, 138, 146, 147, 161, 162, 171, 172, 173, 174, 175 and 176, Anheuser-Busch, Plant #606, in A#26426:

1. Owner/operator shall not exceed the following limits for all sources combined in any consecutive 12-month period:

a) Ink	1,339 gallons
b) Solvent thinner	569 gallons
c) Acetone	90 gallons

[Basis: Cumulative Increase]
2. Owner/operator shall not use materials other than those materials specified in Part 1 without first obtaining written authorization from the District. [Basis: Cumulative Increase]
3. Owner/operator shall not exceed 17,370 pounds POC emissions combined from these sources in any consecutive 12-month period. Owner/operator shall not exceed 603 pounds NPOC emissions combined from these sources in any consecutive 12-month period. Owner/operator shall not use materials which increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5. [Basis: Cumulative Increase, Toxics]
4. Owner/operator shall maintain a District approved logbook on a monthly basis of the following:
 - a. Type and monthly usage of all POC-containing materials;
 - b. Type and monthly usage of all NPOC-containing materials;
 - c. If a POC-containing material other than those specified in Part 1 is authorized by the District, mass emission calculations demonstrating compliance with the POC emission limit in Part 3 shall be recorded;
 - d. Running totals of 12-month emissions of POC and NPOCRecords shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: recordkeeping]

End of Conditions

RECOMMENDATION

Issue a Permit to Operate to Anheuser-Busch, Inc for the following equipment:

- S-173 Videojet Bottle Coder, Model VJ1620, Can Line 50**
- S-174 Videojet Bottle Coder, Model VJ1620, Can Line 50**
- S-176 Videojet Bottle Coder, Model VJ1620, Can Line 50**

Issue an Authority to Construct to Anheuser-Busch, Inc for the following equipment:

- S-171 Videojet Bottle Coder, Model VJ1620, Can Line 40**
- S-172 Videojet Bottle Coder, Model VJ1620, Can Line 40**
- S-175 Videojet Bottle Coder, Model VJ1620, Can Line 40**

Permit Evaluation and Statement of Basis: Site A0606, Anheuser–Busch, LLC, 3101 Busch Drive, Fairfield, CA 94533

By: Simon Margolis
Simon Margolis
Air Quality Engineer

Date: 4/26/2016

ENGINEERING EVALUATION

Anheuser-Busch Inc

Plant No. 606

Application No. 27041

BACKGROUND

Anheuser-Busch, Inc has requested to obtain an Authority to Construct and/or Permit to Operate for the following equipment:

S-179 Case Coder, Can Line 40

The above equipment will be located at 3101 Busch Drive, Fairfield, CA 94534.

The application was filed under the accelerated permitting program. The new case coder is expected to be installed in mid-May, 2015. The new coder will be included and subject to existing condition number 16202, which will be updated to reflect the new source.

EMISSIONS CALCULATIONS

The new source will operate under an existing bubble limit of 17,370 lb/yr of POC and 603 lb/yr NPOC which is established under permit condition 16202. Anheuser-Busch has requested that the limiting condition remain unchanged. Therefore, this application will not result in any increase in emissions.

PLANT CUMMULATIVE INCREASE

Anheuser-Busch at “3101 Busch Drive, Fairfield, CA 94534” (Plant No. 606) is an existing facility. Table 1 summarizes the cumulative increases in criteria pollutant emissions that will result at Plant 606 from this application.

Table 1. Cumulative increases in tons/year

Pollutants	Current Emissions (TPY)	New Emissions (TPY)	New Total Emissions (TPY)
POC	39.586	0.000	39.586
NO _x	0.671	0.000	0.671
SO ₂	4.403	0.000	4.403
CO	3.612	0.000	3.612
PM ₁₀	0.412	0.000	0.412

TOXIC RISK SCREENING

The new coder will use the same solvent-based ink as the existing coders (the new coder is identical in operation to S-120). Based on the material safety data sheet submitted with the application, the ink used with not contain any compounds identified as toxic air contaminants in Regulation 2-5. Therefore, compliance with the toxic risk requirements is expected.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

In accordance with Regulation 2, Rule 2, Section 301, BACT is triggered for any new or modified source with the potential to emit 10 pounds or more per highest day of POC, NPOC, NO_x, CO, SO₂ or PM₁₀. With an existing bubble emission limit of 17,320 lb/yr of POC across 16 printers, the maximum emissions from any one source, including the new coder, are expected to be below 3 lb/day of POC, well below the trigger level for BACT.

OFFSETS

Offsets must be provided for any new or modified source at a facility that emits more than 10 tons per year of POC or NO_x per Regulation 2, Rule 2, Section 302. PM₁₀ and SO₂ offset requirements apply only to major facilities with a cumulative increase, minus contemporaneous emission reduction credits, in excess of 1 ton/year since April 5, 1991 per Regulation 2, Rule 2, Section 303.

Anheuser-Busch at "3101 Busch Drive, Fairfield, CA 94534" (Plant No. 606) is an existing facility. This application constitutes a new source with no increase in emissions. Therefore, offsets are not required.

STATEMENT OF COMPLIANCE

The new source is subject to Regulation 8, Rule 4: General Solvent and Surface Coating Operations. The source will not emit more than 5 tpy, and are therefore in compliance with the Rule.

The project is considered to be ministerial under the District's CEQA regulation 2-1-311 and therefore is not subject to CEQA review. The engineering review for this project requires only the application of standard permit conditions and standard emissions factors and therefore is not discretionary as defined by CEQA (BAAQMD Permit Handbook, Chapter 5.7).

The project is over 1,000 feet from the nearest school and therefore is not subject to the public notification requirements of Reg. 2-1-412.

A Toxics Risk Screening Analysis is not required due to the emissions at the rates discussed above.

PSD, BACT, Offsets, NSPS, and NESHAPS are not triggered.

PERMIT CONDITIONS

Condition No. 16202 -----

The following permit condition 16202, as amended in A#11782, A#13621, A#14949, and A#26426 is further amended as follows for S-75, 76, 77, 78, 120, 121, 128, 131, 132, 133, 138, 146, 147, 161, 162, 171, 172, 173, 174, 175, 176, 177, 178, and 179, Anheuser-Busch, Plant #606, in A#27041:

1. Owner/operator shall not exceed the following limits for all sources combined in any consecutive 12-month period:

- a) Ink 1,339 gallons
- b) Solvent thinner 569 gallons
- c) Acetone 90 gallons

[Basis: Cumulative Increase]

2. Owner/operator shall not use materials other than those materials specified in Part 1 without first obtaining written authorization from the District. [Basis: Cumulative Increase]

3. Owner/operator shall not exceed 17,370 pounds POC emissions combined from these sources in any consecutive 12-month period. Owner/operator shall not exceed 603 pounds NPOC emissions combined from these sources in any consecutive 12-month period. Owner/operator shall not use materials which increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5. [Basis: Cumulative Increase, Toxics]

4. Owner/operator shall maintain a District approved logbook on a monthly basis of the following:

- a. Type and monthly usage of all POC-containing materials;
- b. Type and monthly usage of all NPOC-containing materials;

c. If a POC-containing material other than those specified in Part 1 is authorized by the District, mass emission calculations demonstrating compliance with the POC emission limit in Part 3 shall be recorded;

d. Running totals of 12-month emissions of POC and NPOC

Records shall be retained for a period of at least 5 years from the date of entry and made readily available to District staff upon request. [Basis: recordkeeping]

End of Conditions

RECOMMENDATION

Issue a Permit to Operate to Anheuser-Busch, Inc for the following equipment:

S-179 Case Coder, Can Line 40

By: Simon Margolis
Simon Margolis
Air Quality Engineer

Date: 4/26/2016

APPENDIX B

GLOSSARY

ACT

Federal Clean Air Act

APCO

Air Pollution Control Officer

ARB

Air Resources Board

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

Basis

The underlying authority which allows the District to impose requirements.

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CAM

Compliance Assurance Monitoring per 40 CFR Part 64

CAPCOA

California Air Pollution Control Officers Association

CEM

Continuous Emission Monitor

CEQA

California Environmental Quality Act

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO

Carbon Monoxide

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date pursuant to BAAQMD Rule 2-1-403, Permit Conditions (as amended by the District Board on 7/17/91) and SIP Rule 2-1-403, Permit Conditions (as approved by EPA on 6/23/95). Cumulative increase is used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District regulations.

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60 (NSPS), Part 61 (NESHAPs), Part 63 (MACT), and Part 72 (Permits Regulation, Acid Rain), including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

FP

Filterable Particulate as measured by BAAQMD Method ST-15, Particulate.

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by 40 CFR Part 63.

Major Facility

A facility with potential emissions of: (1) at least 100 tons per year of regulated air pollutants, (2) at least 10 tons per year of any single hazardous air pollutant, and/or (3) at least 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity of hazardous air pollutants as determined by the EPA administrator.

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Federal Clean Air Act and implemented by District Regulation 2, Rule 6.

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAPS

National Emission Standards for Hazardous Air Pollutants. See in 40 CFR Parts 61 and 63.

NMHC

Non-methane Hydrocarbons (Same as NMOC)

NMOC

Non-methane Organic Compounds (Same as NMHC)

NO_x

Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Federal Clean Air Act, and implemented by 40 CFR Part 60 and District Regulation 10.

NSR

New Source Review. A federal program for pre-construction review and permitting of new and modified sources of pollutants for which criteria have been established in accordance with Section 108 of the Federal Clean Air Act. Mandated by Title I of the Federal Clean Air Act and implemented by 40 CFR Parts 51 and 52 and District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets for the emissions from a new or modified source. Applies to emissions of POC, NO_x, PM₁₀, and SO₂.

Phase II Acid Rain Facility

A facility that generates electricity for sale through fossil-fuel combustion and is not exempted by 40 CFR 72 from Titles IV and V of the Clean Air Act.

POC

Precursor Organic Compounds

PM

Particulate Matter

PM₁₀

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of those air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

PTE

Potential to Emit as defined by BAAQMD Regulation 2-6-218

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Air Ambient Quality Standards. Mandated by Title I of the Act.

SO₂

Sulfur dioxide

THC

Total Hydrocarbons (NMHC + Methane)

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

TOC

Total Organic Compounds (NMOC + Methane, Same as THC)

TPH

Total Petroleum Hydrocarbons

TSP

Total Suspended Particulate

VOC

Volatile Organic Compounds

Units of Measure:

bhp	=	brake-horsepower
btu	=	British Thermal Unit
cu. ft.	=	cubic foot
cfm	=	cubic feet per minute
dscf	=	dry standard cubic foot
dscfm	=	dry standard cubic foot per minute
g	=	gram
gal	=	gallon
gpm	=	gallons per minute
gr	=	grain
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inch
max	=	maximum
m ²	=	square meter
min	=	minute
mm	=	million
MMbtu	=	million btu
MMcf	=	million cubic feet
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
tpy	=	tons per year

yr = year